TSE Code: 2379

REALTEK SEMICONDUCTOR CORP.
2019 Annual Report

The annual report is available at:

I. Taiwan Stock Exchange Market Observation Post System: https://mops.twse.com.tw

II. Realtek website for annual report: https://www.realtek.com

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Notice to Readers:

The reader is advised that the annual report has been prepared originally in Chinese. The English version is directly translated from the Chinese version.

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Letter to Shareholders

1. 2019 Operating Results

Realtek delivered stellar operating results in 2019. The full-year consolidated revenues were NT$60.74 billion, a 32.6% growth from the previous year. Gross profit was NT$26.58 billion, up 29.9% from the year before. Net profit after tax was NT$6.79 billion, a 56.1% year-over-year increase. Earnings per share (EPS) was NT$13.36. According to IC Insights, 2019 global semiconductor market revenue was US$442.3 billion, a decline of 12.3% compared to 2018. Despite the macroeconomic impact of a weak memory market and uncertainties of the US-China trade war, Realtek banked on robust product technology, nimble market strategies, and concerted teamwork to produce excellent results. Realtek had the highest growth rate among the world's top 50 semiconductor companies in 2019.

With global demand for connectivity devices of various types continuing to rise rapidly, IC companies must provide products that offer higher performance, are more integrated, and with lower power consumption. Realtek has accumulated a great deal of technological depth in connectivity and continues to make new advances to maintain its market-leading position. Amongst the 2019 top 100 domestic companies that submitted the most patent applications to Taiwan's Intellectual Property Office, Realtek ranked sixth with 333 innovation patent applications. We incorporate these technological advances into new products that meet market needs and stimulate demand. At COMPUTEX Taipei 2019, Realtek won three major awards, including Best Choice Golden awards for our 8K Video Decoder and Processing IC (RTD2893) and our Bluetooth 5 ANC Smart Headset SoC (RTL8773B), and the Best Choice Category award for our Ultra-Low-Power Versatile IoT Solution (RTL8722DM). Particularly notable was the 8K Video Decoder and Processing IC, which led all COMPUTEX award winners by receiving the Best Choice of the Year award.

2. 2020 Business Plan

After outperforming the market in 2019, for 2020 Realtek will release even more competitive products and strengthen positioning of all product lines in order to maintain market growth and technological leadership. For wireless controllers, Realtek's first generation Wi-Fi 6 (11ax) will begin mass production in 2020 for use in a variety of applications. Optimization of existing 11ac and 11n products will provide more solutions with a higher price-performance ratio, thereby consolidating the current customer base while expanding emerging applications and markets.

For IoT controllers, Realtek has a comprehensive set of single-chip SoCs integrating microcontroller, voice, and/or ISP processors. These are highly integrated, low power consumption products that feature strong security and comprehensive AI functions that can meet the changing needs of our various customer groups. Realtek's IoT products are already well-known and are projected to perform well in 2020 as the market quickly expands.

For Bluetooth peripheral products, Realtek's True Wireless Stereo (TWS) single-chip was a favorite among consumers in 2019 and led market growth. In 2020, a new generation of TWS products with Active Noise Cancellation (ANC) will enable Realtek to maintain its position as the leader in Bluetooth audio, and to expand its market influence by working closely with supply chain and brand partners. Additionally, Realtek's Bluetooth Low Power single-chip solutions are a popular choice for voice remote controllers and wearable applications, and should continue to see growth in 2020.

Regarding Ethernet, mass production of Realtek's new generation of 2.5Gbps Ethernet Controllers for PC applications is already underway. With the upgrade of network infrastructure in countries around the world, it will also stimulate the demand for the new 2.5Gbps Ethernet in various connectivity products.
For switch controllers, in recent years Realtek has been actively developing smart switches. In addition to

the research and development of Layer 3 managed switches and higher-speed switches, the 2.5G/5G/10G physical layer technologies are progressing synchronously in Realtek to advance both the depth and breadth of product offerings. In 2020, smart switches will become a primary driver of growth, surpassing unmanaged switches.

In automobile Ethernet products, Realtek is again riding on its technological advantages to lead the world in the release of second-generation products. Its high-port count switch controller, which integrates 100BASE-T1 and 1000BASE-T1 PHYs, is a favorite of European and American automobile OEM manufacturers and tire-1 suppliers. Our switch controllers are on the way to meeting future requirements of new generation automotive in-vehicle network backbones in 2022/2023; we expect this market will be one of the mid-to-long term growth drivers for Realtek.

For TV controllers, in 2019 Realtek products closely matched the needs of the end market to gain the support of customers and achieve steady growth. In 2020, to meet the demand for 8K signal broadcast transmission, Realtek is offering an award-winning 8K TV decoder that does not require changes to the existing TV architecture. Development of this solution has been welcomed by TV customers and resulted in many collaborative design-ins. Besides new 8K products, penetration of the 4K TV market continues, thereby providing further revenue growth opportunity in 2020.

PC product sales grew in 2019 due to extensive commercial PC upgrades and replacements. In 2020, the overall market is expected to be more tepid. Realtek continues, however, to upgrade and optimize its PC codecs, image signal processors, card reader controllers, and Type-C controllers. At the same time, Realtek is developing non-PC applications based on its success in PC solutions. For example, in the consumer audio electronics market, Realtek's unique low power chip design combined with power-saving software/hardware integrated design, smart audio power amplifiers, and programmable audio DSP are gradually finding their way into leading smartphone and electronic gaming brands. In recent years Realtek has developed highly integrated IP Camera single-chips in response to security and surveillance market demand. Target markets include consumer goods and smart home network monitoring devices. In 2020, Realtek will release a new generation of low power AI IP Camera controller with edge computing and H.264/H.265 encoding capabilities. Together, these products will provide consumers with a wide range of competitive solutions.

3. Strategy for Future Development and Impact by Competitive, Regulatory, and Macro Conditions

The global semiconductor industry faced numerous challenges in 2019, including uncertainties due to the US-China trade war, a weak market for memory, and slowed growth for high-end mobile phones and automotive and industrial applications. Before the start of 2020, despite the ongoing trade war, increased demand from 5G and AI was expected to restore growth to the industry. However, the sudden outbreak of COVID-19 epidemic is adding another uncertainty to the economic environment. Throughout, Realtek continued developing key technologies to provide customers with the best connectivity solutions for diverse applications they use. In the future, we will uphold this principle. We will use years of technological experience as well as our agile and flexible management strategies to face up to all challenges and produce greater value for all shareholders. We hope you will continue moving ahead with us on this exciting journey.

Thank you for your care and support! We wish you a healthy and prosperous future.

Chairman Yeh, Nan-Horng

President Chiu, Sun-Chien

Controller Chang, Jr-Neng

Company Introduction

I. Date of Establishment

Realtek Semiconductor Corporation ("the Company") was incorporated on October 21, 1987, and debuted on the Taiwan Stock Exchange in October 1998. It is headquartered in Taiwan and it has sales or R&D teams in China, Singapore, the United States, Japan, and South Korea.

II. Company Milestones

1987/10	The Company is incorporated.
1988/04	The Company's Taipei office is established.
1991/12	The Pocket Ethernet Controller receives an Innovative Technology Award from the Hsinchu Science Park Administration.
1993/12	The High-Performance Window Accelerator Chip receives an Innovative Product Award from the Hsinchu Science Park Administration.
1995/02	The Full Duplex Plug-and-Play Ethernet Controller receives a Product Innovation Award from EDN Asia.
1996/12	For its extensive R&D initiatives and achievements, the Company receives an R&D Participation Award from the Hsinchu Science Park Administration.
1997/06	The Single-Chip Fast Ethernet Controller receives a Best Component Award and a Best Product Award at Computex Taipei 1997.
1997/09	The Company is listed in Gre Tai Securities Market (Taipei Exchange).
1997/11	The Single-Chip Fast Ethernet Controller receives a New Product Development Award from the Industrial Development Bureau, Ministry of Economic Affairs.
1998/10	The Company debuts on the Taiwan Stock Exchange.
1998/12	For the fourth consecutive year, the Company receives an R&D Participation Award from the Hsinchu Science Park Administration.
1999/12	The 4-Port Fast Ethernet Transceiver receives an innovative technology R&D grant from the Hsinchu Science Park Administration.
2000/05	For the first time, the Company issues unsecured convertible bonds; the total value is NT$1.4 billion.
2000/08	For its outstanding R&D achievements, the Company receives a Most Outstanding Award at the Ministry of Economic Affairs' 8^{th} Industrial Technology Development Awards.
2001/12	The Multi-mode Single-Chip 10/100M Fast Ethernet Controller SoC receives a Component Design Award from *EDA Asia Magazine*.
2002/01	For the first time, the Company issues Overseas Depositary Receipts; the total value is US$240,180,375.
2002/06	The ALC650 6-Channel Audio Codec receives a Best Choice Award at Computex Taipei 2002.
2002/11	The Company ranks among the Global Top 10 Electronic Component Providers by Taiwan's *Micro-Electronics Magazine*.
2003/10	For the second consecutive year, the Company ranks among the Forbes Global 200 Best Small Companies.

2003/10	The RTL8169S/RTL8110 Single-Chip Gigabit Ethernet Controller receives an Innovative Product award from the Hsinchu Science Park Administration.
2004/03	The PCI Express Single-Chip Gigabit Ethernet Controller receives an innovation R&D grant for NT$3 million from the Hsinchu Science Park Administration.
2004/06	The Dual-Band Triple-Mode WLAN Chipsets RTL8185L and RTL8255 receive a Best Choice Award at Computex Taipei 2004.
2004/09	The reference designs of the IEEE802.11a/b/g WLAN Chipsets RTL8185L and RTL8255 pass the Wi-Fi Alliance’s WPA2 (Wi-Fi Protected Access 2) testing and become the golden test bed.
2004/10	The Dual-Band Triple-Mode WLAN Chipset receives an Outstanding IT Application/Product Award from the committee for Taiwan Information Technology Month.
2004/12	The WLAN Chipsets RTL8187L and RTL8255 receive an Innovative Product Award from the Hsinchu Science Park Administration.
2004/12	The Company receives an R&D Accomplishment Award from the Hsinchu Science Park Administration.
2005/03	The Company unveils the ALC882 7.1+2 Channel High Definition Audio Codec.
2005/06	The Company celebrates the grand opening of its new building on Innovation Rd. II in Hsinchu Science Park.
2005/08	The Company releases the RTS5111, the world’s first USB 2.0 All-in-One Card Reader Controller with Integrated 5V/3.3V Regulator and Power MOSFET.
2005/11	For its substantive R&D achievements, the Company receives another R&D Accomplishment Award from the Hsinchu Science Park Administration.
2006/03	The Company releases a new generation of High Definition Audio codecs, the ALC885 and ALC888 Telecom.
2006/03	The ALC888 Telecom receives a Technology Innovation Accelerated Award for the “Digital Office” platform at the 2006 Intel Developer Forum.
2006/08	The Company passes ISO 14001 Environmental Management Systems certification.
2006/10	The Company celebrates its 20th anniversary.
2006/12	The ALC888 Telecom receives an Innovative Product Award from the Hsinchu Science Park Administration.
2006/12	For the third consecutive year, the Company receives an R&D Accomplishment Award from the Hsinchu Science Park Administration.
2007/01	At an extraordinary shareholders’ meeting, shareholders approved a capital reduction of NT$4,180,701,000 (each share qualified for a rebate of approximately NT$5); the reduction ratio is 50%.
2007/06	The RTL8111C PCI Express Single-Chip Gigabit Ethernet Controller receives a Best Choice Award at Computex Taipei 2007.
2007/07	The Company releases the RTL8366S and RTL8366SR low power, highly integrated 6-Port Gigabit Ethernet Switch Controller Single-Chip solutions featuring patented Green Ethernet technology.
2007/10	The Company releases the RTS5161/68/69, the world’s first multi-function card reader controller to integrate a NAND flash card reader, a smart card reader, a fingerprint reader, and an IR receiver.

2007/10	The Company releases the ALC269, which is the first HD Audio Codec to integrate a 2W Class D Amplifier and the latest low power specifications. The device represents a breakthrough in reducing the power consumption of laptop computers.
2007/11	The Company releases the ALC889 HD Audio Codec, which features a Signal-to-Noise Ratio (SNR) of 108dB and is the only HD Audio Codec to have full rate Blu-Ray DVD playback.
2007/12	The RTL8111C-GR PCI Express Gigabit Ethernet Controller receives an Innovative Product Award from the Hsinchu Science Park Administration.
2007/12	For the fourth consecutive year, the Company receives an R&D Accomplishment Award from the Hsinchu Science Park Administration.
2008/05	The Company demonstrates a series of Networked Multimedia SoC solutions at Computex Taipei 2008.
2008/06	The RTD2485D All-in-One LCD Monitor Controller receives a Best Choice Award at Computex Taipei 2008.
2008/09	The Company releases the RTL8191S and RTL8192S, the world's smallest, most energy efficient 802.11n WLAN IC Single-Chip solutions. They are the first controllers to integrate MAC/BB/RF with an embedded power amplifier, EEPROM, and switching regulators.
2008/10	The RTL8366SR 5+1-Port Gigabit Ethernet Switch Controller Single-Chip receives a 2008 EDN China Innovation Award.
2008/12	The RTD2485D All-in-One LCD Monitor Controller receives an Innovative Product Award from the Hsinchu Science Park Administration.
2009/08	The Company receives a 2009 National Invention and Creation Award.
2009/10	The Company releases the RTL8111E, the first Gigabit Ethernet Controller SoC to use the IEEE 802.3az standard.
2009/10	The RTD1073 Full-HD Digital Media Processor receives a 2009 EDN China Innovation Award.
2009/11	The RTD1073/1283 Full-HD Digital Media Processor receives a 2009 Outstanding IT Application/Product Award.
2009/11	The RTL8111DP-GR PCI Express Gigabit Ethernet Management Controller receives a 2009 Innovative Product Award from the Hsinchu Science Park Administration.
2009/11	The Company receives the International Exchange and Cooperation Award from the Hsinchu Science Park Administration.
2009/11	The Company receives the 2009 R&D Accomplishment Award from the Hsinchu Science Park Administration.
2010/01	At the 2010 CES, the Company demonstrates industry-leading Green Ethernet power-savings technology, including the IEEE 802.3az Ethernet Single-Chip and Switch Controller, as well as the world's most energy efficient power-over-USB 2x2 802.11n Wireless Router using the Company's Green WLAN technology.
2010/06	The ALC899-GR High Fidelity PC Audio Codec receives a Best Choice Award at Computex Taipei 2010.
2010/06	The RTL8111E Single-Chip Gigabit Ethernet Controller receives a Best Choice Award at Computex Taipei 2010.

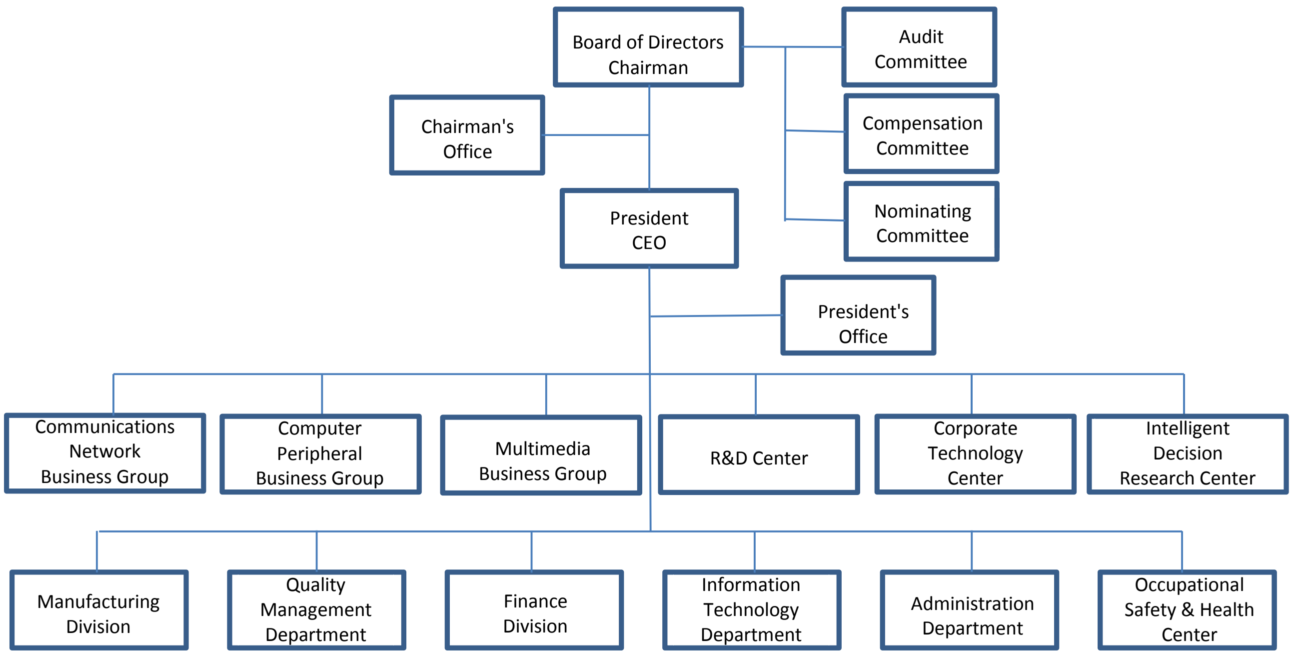
2010/12	The RTL8111E Single-Chip Gigabit Ethernet Controller receives a 2010 Outstanding IT Application and Products Award.
2010/12	The RTL8367M 7-Port Gigabit Ethernet Switch Controller receives a 2010 Innovative Product Award from the Hsinchu Science Park Administration.
2010/12	The Company receives a 2010 Science Park R&D Accomplishment Award.
2011/10	The Company receives the 1st Taiwan Green Classics Award, hosted by the Bureau of Foreign Trade, Ministry of Economic Affairs.
2011/12	The Company receives an Industrial Sustainable Excellence Award from the Industrial Development Bureau, Ministry of Economic Affairs.
2011/12	The Company receives a National Industrial Innovation Award – Outstanding Enterprise Innovation Award from the Department of Industrial Technology, Ministry of Economic Affairs.
2011/12	The Company receives a 2011 Science Park R&D Accomplishment Award.
2012/12	The ALC5642 Hi-Fi Audio Integrated with Voice/Sound DSP and Codec Single-Chip receives a 2012 Innovative Product Award from the Hsinchu Science Park Administration.
2012/12	The Company receives a 2012 Science Park R&D Accomplishment Award.
2013/06	The RTD2995 4K2K UHD Smart TV SoC receives a Best Choice Golden Award at Computex Taipei 2013.
2013/11	The RTL8153 Low Power USB 3.0-to-Gigabit Ethernet Controller receives a 2013 EDN China Innovation Award.
2013/12	The RTD2995 4K2K UHD Smart TV SoC receives a 2013 Innovative Product Award from the Hsinchu Science Park Administration.
2014/06	The RTL8118AS Ultra Low Power Gaming NIC receives a Best Choice Green ICT Award at Computex Taipei 2014.
2014/06	The RTL8881A AP/Router Network Processor SoC (with 11ac Wi-Fi) receives a Best Choice Award (in Communication) at Computex Taipei 2014.
2015/04	The Company’s subsidiary Realtek Singapore Pte Ltd. acquires 100% equity interest of Cortina Access, Inc. and its subsidiaries.
2015/06	The RTL8195AM Low Power Wi-Fi IoT SoC receives a Best Choice Golden Award at Computex Taipei 2015.
2015/12	The RTD2999 4K Ultra-High Picture Quality Smart TV SoC receives a 2015 Innovative Product Award from the Hsinchu Science Park Administration.
2016/06	The RTL8762A Bluetooth Low Energy SoC receives a Best Choice Golden Award at Computex Taipei 2016.
2016/06	The RTS5421 USB 3.1 Type-C Hub receives a Best Choice Golden Award at Computex Taipei 2016.
2016/12	The Company receives a 2016 Science Park R&D Accomplishment Award.
2016/12	The RTL9020AA Automotive Camera SoC Integrated with Audio/Video Processor and Ethernet receives a 2016 Innovative Product Award from the Hsinchu Science Park Administration.
2017/06	The RTL9047A Automotive Ethernet Switch Controller receives a Best Choice Award in the Car Electronics category at Computex Taipei 2017.
2017/06	The RTL8771B Low Power Wearable GNSS Receiver receives a Best Choice Award in the Mobile & Wearables category at Computex Taipei 2017.

2017/06	The world's most energy efficient Bluetooth 5 Dual Mode Audio SoC, the RTL8763B, receives a Best Choice Award in the IC & Components category at Computex Taipei 2017.
2017/06	The RTL8117 Personal Cloud IC Solution receives a Best Choice Award: the Jury's Special at Computex Taipei 2017.
2017/11	The Communications Network Group's CN3 Wi-Fi R&D team receives a 2017 Outstanding Technology Management Award.
2018/05	The Company releases the world's first 2.5G Ethernet Controller SoC for multiple applications, including gaming.
2018/06	The RTL8715A Highly Integrated, Ultra-Low-Power Wi-Fi IP Camera SoC receives a Best Choice Award in the IoT Applications category at Computex Taipei 2018.
2018/06	The RTL8762C Bluetooth 5 Low Energy SoC receives a Best Choice Award in the IC & Components category at Computex Taipei 2018.
2018/06	The ALC5520 Multi-Mic Far-Field Speech Recognition Enhanced SoC solution receives a Best Choice Golden Award at Computex Taipei 2018.
2018/06	The Company receives an Asia Responsible Entrepreneurship Award.
2018/12	The ALC5520 Multi-Mic Far-Field Speech Recognition Enhanced SoC solution receives a 2018 Innovative Product Award from the Hsinchu Science Park Administration.
2019/06	The RTD2893 8K Video Decoder and Processing IC receives the Best Choice of the Year/Golden Award at Computex Taipei 2019.
2019/06	The RTL8773B Bluetooth 5 ANC Smart Headset SoC receives a Best Choice Golden Award at Computex Taipei 2019.
2019/06	The RTL8722DM Ameba D: Ultra-Low-Power Versatile IoT Solution wins a Best Choice IoT Category Award at Computex Taipei 2019.
2019/12	The RTD2893 8K Video Decoder and Processing IC receives a 2019 Innovative Product Award from the Hsinchu Science Park Administration.
2019/12	The Company receives a 2019 Science Park R&D Accomplishment Award for overall R&D results.

Corporate Governance Report

I. Organization

1. Organizational Structure



2. Responsibilities of Main Departments

Department	Key Responsibilities
Chairman’s Office	Reviews the Company’s operations and implementation of resolutions made by shareholders’ meetings and the Board of Directors; Company audits.
President’s Office	Plans and executes the Company’s operational strategies and analysis; carries out Board of Directors’ resolutions, investment assessments, PR statements, legal and patent affairs, and international marketing.
Communications Network Business Group	Manages communications network product R&D, planning and marketing.
Computer Peripheral Business Group	Manages computer peripheral product R&D, planning and marketing.
Multimedia Business Group	Manages multimedia product R&D, planning and marketing.
R&D Center	Plans new products, develops and designs relevant core technologies, and manages circuit layouts.
Corporate Technology Center	Oversees the planning, research and service of all advanced technologies needed in Company’s product development
Intelligent Decision Research Center	Oversees big data analytics.
Manufacturing Division	Oversees raw materials, warehousing, materials control, procurement, IC manufacturing and testing, and testing equipment maintenance.
Quality Management Department	Oversees product quality control and reliability engineering.
Finance Division	Oversees finance, accounting, and stock affairs.
Information Technology Department	Oversees information management and computer systems integration and applications.
Administration Department	Oversees general affairs, factory administration, and human resources.
Occupational Safety & Health Center	Oversees occupational safety and health.

II. Information of Directors and Officers

1. Information of Directors

April 12, 2020

Title	Nationality / Country of Origin	Name	Gender	Date Elected	Term of Office	Date First Elected	Shareholding When Elected		Current Shareholding		Spouse & Minor Shareholding		Shareholding by Nominee Arrangement		Education & Experience	Other Selected Current Positions	Managers or Directors who are spouse or within second-degree relatives to each other		
							Share	%	Share	%	Share	%	Share	%			Title	Name	Relation
Director	ROC	Cotek Pharmaceutical Industry Co., Ltd.	-	2018.06.05	3 years	2015.06.09	22,146,604	4.36%	22,146,604	4.34%	-	-	-	-	NA	NA			
Chairman	ROC	Cotek Pharmaceutical Industry Co., Ltd. Representative: Yeh, Nan-Horng	Male	2018.06.05	3 years	1994.04.02 (Note1)	-	-	-	-	-	-	-	-	MBA(Master of Business Administration) ,Washington University in St. Louis, USA.	Chairman of Realsil Microelectronics Corp. (Note 2)	Director	Yeh, Po-Len	Brother
Director	BVI	Forehead International Co., Ltd.	-	2018.06.05	3 years	2009.06.10	6,184,359	1.22%	5,023,359	0.98%	-	-	-	-	NA	NA			
Vice Chairman	ROC	Forehead International Co., Ltd. Representative: Chiu, Sun-Chien	Male	2018.06.05	3 years	2000.06.09	1,388,831	0.27%	1,370,831	0.27%	2,384	0.00%			M.S. in Electrical Engineering, National Taiwan University	President of Realtek Semiconductor Corp. Director of Realsun Technology Corporation (Note 2) Director of Realking Investments Limited (Note 2) Director of Hungwei Venture Capital Co., Ltd (Note 2) Director of Realtek Semiconductor (Japan) Corp. (Note 2)	-		
Director	ROC	Forehead International Co., Ltd. Representative: Chern, Kuo-Jong	Male	2018.06.05	3 years	2006.06.12	40,686	0.01%	40,686	0.01%					MBA(Master of Business Administration), The City University of New York, USA.	Chief Financial Officer of Realtek Semiconductor Corp. Director of Realsun Investments Co., Ltd (Note2) Director of Realtek Semicomduductor (ShenZhen) Corp. (Note 2)			
Director	BVI	Sonnen Limited	-	2018.06.05	3 years	2015.06.09	66,000	0.01%	66,000	0.01%	-	-	-	-	NA	NA			
Director	ROC	Sonnen Limited Representative: Yeh, Po-Len	Male	2018.06.05	3 years	1991.06.26	2,323,899	0.46%	2,323,899	0.46%	208,398	0.04%			MSc. & Ph.D. in Material Engineering, Loughbourough University of Technology, United Kingdom	Director of Realsun Technology Corporation (Note 2) Director of Realking Investments Limited (Note 2) Director of Hungwei Venture Capital Co., Ltd (Note 2) Director of Realtek Semiconductor (HK) Ltd. (Note 2)	Chairman	Yeh, Nan-Horng	Brother
Director	ROC	Sonnen Limited Representative: Huang, Yung-Fang	Male	2018.06.05	3 years	2018.06.05	42,205	0.01%	42,205	0.01%	79,625	0.02%			M.S. in Electrical Engineering, State University of New York, USA	Chief Operating Officer of Realtek Semiconductor Corp. Director of Hungwei Venture Capital Co., Ltd. (Note 2) Director of Realsun Investments Co., Ltd. (Note 2) Director of Realking Investments Limited (Note 2) Director of Realsun Technology Corporation (Note 2) Chairman of Realtek Singapore Pte Ltd. (Note 2) Chairman of Realtek Investment Singapore Private Limited (Note 2) Director of Cortina Access, Inc. (Note 2) Chairman of Cortina Systems Taiwan Limited (Note 2)			
Director	ROC.	Ni, Shu-Ching	Female	2018.06.05	3 years	1991.06.26	6,308,389	1.24%	6,308,389	1.24%	6,569,949	1.29%			Open Junior College	None			
Independent Director	ROC	Chen, Fu-Yen	Male	2018.06.05	3 years	2015.06.09	-	-	-	-					M.A. in Journalism, National Chengchi University	CEO of Creative Education and Management Foundation Chairman of EZTravel Travel Service Co., Ltd. Chairman of You Hsin Creative Co., Ltd. Chairman of Eland Technologies Co., Ltd. Chairman of Eland Information Co., Ltd			
Independent Director	ROC	Wang, Chun-Hsiung	Male	2018.06.05	3 years	2018.06.05	-	-	-	-					MBA(Master of Business Administration), Tulane University, USA	President of Jasslin Technology Co., Ltd.			
Independent Director	ROC	Ou Yang, Wen-Han	Male	2018.06.05	3 years	2018.06.05	578,688	0.11%	563,688	0.11%	152,024	0.03%			Bachelor of Electrical Engineering, National Taiwan University	None			

Note 1: Chairman Yeh, Nan-Horng did not serve as a director of the Company from 2005.05.20 to 2009.06.09.

Note 2: The representative of Realtek Semiconductor Corp. or its affiliated company.

Table I: The major shareholders of institutional shareholders

April 12, 2020

Institutional Shareholders	Major Shareholders of Institutional Shareholders
Cotek Pharmaceutical Industry Co., Ltd.	Leicester Worldwide Corporation (shareholding: 48.24%) De Tao Venture Capital Corp. (shareholding: 20%)
Sonnen Limited	Chang, Tseng Sui Gin (shareholding: 100%)
Forehead International Co., Ltd.	Time Wealth Co., Ltd (shareholding: 100%)

Table II: The major shareholders of the major shareholders of institutional shareholders in Table I

April 12, 2020

Shareholder	Major Shareholders Holding
Leicester Worldwide Corporation	Top Best Development Limited (shareholding: 33%) Apex Fortune Global Limited (shareholding: 33%) Perfectech INT'L Ltd (shareholding: 33%)
Time Wealth Co., Ltd	H.S. Lee Hsia (shareholding: 100%)

Professional Background and Independence of Directors

Criteria / Name	Possess five or more years of experience and the following professional qualifications			Independence Status (Note)												Number of other public companies concurrently serving as an independent director
	An instructor or higher in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the company in a public or private junior college, college, or university.	A judge, public prosecutor, attorney, certified public accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the company.	Have work experience in the area of commerce, law, finance, or accounting, or otherwise necessary for the business of the company.	1	2	3	4	5	6	7	8	9	10	11	12	
Cotek Pharmaceutical Industry Co., Ltd. Representative: Yeh, Nan-Horng			✓			✓	✓	✓	✓	✓	✓	✓		✓		0
Forehead International Co., Ltd. Representative: Chiu, Sun-Chien			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		0
Forehead International Co., Ltd. Representative: Chern, Kuo-Jong			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		0
Sonnen Limited Representative: Yeh, Po-Len			✓			✓	✓	✓	✓	✓	✓	✓		✓		0
Sonnen Limited Representative: Huang, Yung-Fang			✓			✓	✓	✓	✓	✓	✓	✓	✓	✓		0
Ni, Shu-Ching			✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	0
Chen, Fu-Yen			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Wang, Chun-Hsiung			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0
Ou Yang, Wen-Han			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0

Note: 'V' indicates the conditions listed met during the director's terms and two years prior.

(1) Not an employee of the company or any of its affiliates.

(2) Not a director or supervisor of the company or any of its affiliates. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of one percent or more of the total number of issued shares of the company or ranking in the top 10 in holdings.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) Not a director, supervisor, or employee of a corporate shareholder that directly holds five percent or more of the total number of issued shares of the company or of a corporate shareholder that ranks among the top five in shareholdings. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(6) Not a director, supervisor or employee of another companies controlled by the same person with more than half of directors or voting shares of the company and another companies. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(7) Not a director, supervisor or employee of another companies or institutions who are the same person or spouse as the company's chairman, president or equivalent. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(8) Not a director, supervisor, officer, or shareholder holding five percent or more of the shares, of a specified company or institution that has a financial or business relationship with the company. (The same does not apply, however, in cases where the specified company or institution holds 20 percent or more and no more than 50 percent of the total number of issued shares of the company, and the person is an independent

director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(9) Not a professional individual who, or an owner, partner, director, supervisor, officer or their spouse of a sole proprietorship, partnership, company, or institution that, provides audit or commercial, legal, financial, or accounting services with remuneration in the past two years with cumulative amounts exceeding NT$ 500,000 to the company or to any affiliate of the company. However, this restriction does not apply to a member of the remuneration committee, public tender offer review committee, or special committee for merger/consolidation and acquisition, who exercises powers pursuant to the Act or to the Business Mergers and Acquisitions Act or related laws or regulations.

(10) Not a spouse or relative within the second degree of kinship to any of other directors.

(11) Not under any condition pursuant to Article 30 of the Company Act.

(12) Not a juridical person or its representative as defined in Article 27 of the Company Act.

2. Information of President and Vice Presidents

April 12, 2020

Title	Nationality	Name	Gender	Date Appointed	Shareholding		Spouse & Minor Shareholding		Shareholding by Nominee Arrangement		Education & Experience	Other Selected Current Positions	Managers who are spouse or second-degree relative		
					Total	%	Total	%	Total	%			Title	Name	Relation
President	ROC	Chiu, Sun-Chien	Male	1999.07.01	1,370,831	0.27%	2,384	0.00%	-	-	M.S. in Electrical Engineering, National Taiwan University	Director of Realsun Technology Corporation (Note) Director of Realking Investments Limited (Note) Director of Hungwei Venture Capital Co., Ltd (Note) Director of Realtek Semiconductor (Japan) Corp. (Note)	-	-	-
Chief Operating Officer	ROC	Huang, Yung-Fang	Male	2015.04.27	42,205	0.01%	79,625	0.02%	-	-	M.S. in Electrical Engineering, State University of New York, USA	Director of Realtek Venture Capital Co., Ltd (Note) Director of Realsun Investments Co., Ltd (Note) Director of Realking Investments Limited (Note) Director of Realsun Technology Corporation (Note) Chairman of Realtek Singapore Pte Ltd. (Note) Chairman of Realtek Investment Singapore Private Limited (Note) Director of Cortina Access, Inc. (Note) Chairman of Cortina Systems Taiwan Limited (Note)	-	-	-
Chief Financial Officer	ROC	Chern, Kuo-Jong	Male	2002.03.28	40,686	0.01%	0	0.00%	-	-	MBA(Master of Business Administration), The City University of New York, USA	Director of Realsun Investments Co., Ltd (Note) Director of Realtek Semicomductor (ShenZhen) Corp. (Note)	-	-	-
Vice President	ROC	Huang, Yee-Wei	Male	2014.03.24	188,560	0.04%	0	0.00%	-	-	Ph.D. in Chemical Engineering, Kansas State University, USA	Chairman of Realsun Investments Co., Ltd (Note)	-	-	-
Vice President	ROC	Lin, Ying-Hsi	Male	2018.03.13	50,000	0.01%	0	0.00%	-	-	M.S. in Electrical Engineering, National Taiwan University	Director of Realtek Semiconductor (HK) Limited (Note)	-	-	-
Vice President	ROC	Lin, Lung-Wei	Male	2018.03.13	112,118	0.02%	17,989	0.00%	-	-	MBA(Master of Business Administration), National Chengchi University	Director of C-Media Electronics Inc. (Note)	-	-	-
Vice President	ROC	Chang, King-Hsiung	Male	2018.03.13	120,267	0.02%	0	0.00%	-	-	B.S in Electronics Engineering, National Chiao Tung University	None	-	-	-
Vice President	ROC	Tsai, Jon-Jinn	Male	2018.10.30	74	0.00%	0	0.00%	-	-	M.S. in Electrical Engineering, National Taiwan University	Director of Compal Broadband Networks Inc. (Note)	-	-	-
Vice President	ROC	Yen, Kuang-Yu	Male	2018.10.30	23,948	0.00%	4,000	0.00%	-	-	M.S. in Communications Engineering , National Chiao Tung University	Director of Realtek Singapore Pte. Ltd. (Note) Director of Realtek Investment Singapore Private Limited (Note) Director of Cortina Access, Inc. (Note) Chairman of Cortina Systems Taiwan Limited (Note)	-	-	-
Controller	ROC	Chang, Jr-Neng	Male	2007.03.16	35,045	0.01%	0	0.00%	-	-	M.A. in Accounting, National Taiwan University	Director of Realtek Investment Singapore Private Limited Supervisor of Greatek Electronics Inc. (Note)	-	-	-

Note: The representative of Realtek Semiconductor Corp. or its affiliated company.

3. Remuneration for Directors and Officers

3.1 Directors' Remuneration

2019 / Unit: NT$K

Title	Name	Director remuneration: Remuneration (A) – REALTEK	Director remuneration: Remuneration (A) – Consolidated Entities	Director remuneration: Pension (B) – REALTEK	Director remuneration: Pension (B) – Consolidated Entities	Director remuneration: Remuneration from profit distribution (C) (Note 1) – REALTEK	Director remuneration: Remuneration from profit distribution (C) (Note 1) – Consolidated Entities	Director remuneration: Business expenses (D) – REALTEK	Director remuneration: Business expenses (D) – Consolidated Entities	A + B + C+D as percentage of net income after taxes – REALTEK	A + B + C+D as percentage of net income after taxes – Consolidated Entities	Remuneration from concurrent position as employee: Salaries, bonuses and special expenses (E) (Note 2) – REALTEK	Remuneration from concurrent position as employee: Salaries, bonuses and special expenses (E) (Note 2) – Consolidated Entities	Remuneration from concurrent position as employee: Pension (F) – REALTEK	Remuneration from concurrent position as employee: Pension (F) – Consolidated Entities	Remuneration from concurrent position as employee: Profit distribution for employee compensation (G) – REALTEK – Cash	Remuneration from concurrent position as employee: Profit distribution for employee compensation (G) – REALTEK – Stock	Remuneration from concurrent position as employee: Profit distribution for employee compensation (G) – Consolidated Entities – Cash	Remuneration from concurrent position as employee: Profit distribution for employee compensation (G) – Consolidated Entities – Stock	A + B + C + D + E+F+G as percentage of net income after taxes – REALTEK	A + B + C + D + E+F+G as percentage of net income after taxes – Consolidated Entities	Remuneration received from investment business other than subsidiaries or parent company
Chairman	Cotek Pharmaceutical Industry Co., Ltd. Representative: Yeh, Nan-Horng					119,028	119,028	1,440	1,440	1.77%	1.77%	34,559	34,559	995	995	24,600	0	24,600	0	2.66%	2.66%	None
Vice Chairman	Forehead International Co., Ltd. Representative: Chiu, Sun-Chien																					
Director	Forehead International Co., Ltd. Representative: Chern, Kuo-Jong																					
Director	Sonnen Limited Representative: Yeh, Po-Len																					
Director	Sonnen Limited Representative: Huang, Yung-Fang																					
Director	Ni, Shu-Ching																					
Independent Director	Chen, Fu-Yen					800	800	480	480	0.02%	0.02%	0	0	0	0	0	0	0	0	0.02%	0.02%	None
Independent Director	Wang, Chun-Hsiung																					
Independent Director	Ou Yang, Wen-Han																					

Note 1: The relevant compensation of 2,581 thousand dollars for the drivers is not included.
Note 2: In addition to the above table, in recent year, the directors of the Company provided services for all companies in the financial reports (such as consultants who are non-employees): 0
Note 3: The Company's independent directors' remuneration includes directors' remuneration and business expenses. Directors' remuneration is determined by remuneration committee with reference to the industry's usual level of payment, and considerations of the performance evaluation results of the board of directors, individual board members, and functional committees, the time spent, and the responsibilities undertaken, etc. After evaluation of the relevance of individual performance and business performance and future risks, a proposal is submitted to the board of directors for discussion and approval.

Remuneration Range

Remuneration Range	Name of Directors			
	Total remuneration (A+B+C+D)		Total remuneration (A+B+C+D+E+F+G)	
	REALTEK	Consolidated Entities	REALTEK	Consolidated Entities
Less than $1,000,000	Yeh, Nan-Horng, Chiu, Sun-Chien, Chern, Kuo-Jong, Yeh, Po-Len, Huang, Yung-Fang, Chen, Fu-Yen, Wang, Chun-Hsiung, Ou Yang, Wen-Han	Yeh, Nan-Horng, Chiu, Sun-Chien, Chern, Kuo-Jong, Yeh, Po-Len, Huang, Yung-Fang, Chen, Fu-Yen, Wang, Chun-Hsiung, Ou Yang, Wen-Han	Chen, Fu-Yen, Wang, Chun-Hsiung, Ou Yang, Wen-Han	Chen, Fu-Yen, Wang, Chun-Hsiung, Ou Yang, Wen-Han
$1,000,000 (incl.) - $2,000,000 (excl.)	Ni, Shu-Ching	Ni, Shu-Ching	Ni, Shu-Ching	Ni, Shu-Ching
$2,000,000 (incl.) - $3,500,000 (excl.)				
$3,500,000 (incl.) - $5,000,000 (excl.)				
$5,000,000 (incl.) - $10,000,000 (excl.)			Yeh, Po-Len,	Yeh, Po-Len,
$10,000,000 (incl.) - $15,000,000 (excl.)			Yeh, Nan-Horng, Huang, Yung-Fang, Chern, Kuo-Jong,	Yeh, Nan-Horng, Huang, Yung-Fang, Chern, Kuo-Jong,
$15,000,000 (incl.) - $30,000,000 (excl.)	Cotek Pharmaceutical Industry Co., Ltd.	Cotek Pharmaceutical Industry Co., Ltd.	Chiu, Sun-Chien, Cotek Pharmaceutical Industry Co., Ltd.	Chiu, Sun-Chien, Cotek Pharmaceutical Industry Co., Ltd.
$30,000,000 (incl.) - $50,000,000 (excl.)	Sonnen Limited, Forehead International Co., Ltd.	Sonnen Limited, Forehead International Co., Ltd.	Sonnen Limited, Forehead International Co., Ltd.	Sonnen Limited, Forehead International Co., Ltd.
$50,000,000 (incl.) - $100,000,000 (excl.)				
$100,000,000 and above				
Total	12	12	12	12

3.2 Officer's Compensation

2019 / Unit: NT$K

Title	Name	Salary (A)		Pension (B)		Bonuses and special expenses (C) (Note)		Employee compensation (D)				A + B + C + D as percentage of net income after taxes		Compenation received frominvestment business other than subsidiaries or parent company
								REALTEK		Consolidated Entities				
		REALTEK	Consolidated Entities	REALTEK	Consolidated Entities	REALTEK	Consolidated Entities	Cash	Stock	Cash	Stock	REALTEK	Consolidated Entities	
President	Chiu, Sun-Chien													
Chief Operating Officer	Huang, Yung-Fang													
Chief Financial Officer	Chern, Kuo-Jong													
Vice President	Huang, Yee-Wei													
Vice President	Lin, Ying-Hsi	37,596	37,596	2,256	2,256	30,661	30,661	31,309	0	31,309	0	1.50%	1.50%	None
Vice President	Lin, Lung-Wei													
Vice President	Chang, King-Hsiung													
Vice President	Tsai, Jon-Jinn													
Vice President	Yen, Kuang-Yu													
Controller	Chang, Jr-Neng													

Note: The relevant compensation of 866 thousand dollars for the driver is not included.

Compensation Range

Compensation Range	Name of Presidents and Vice Presidents	
	REALTEK	Consolidated Entities
Less than $1,000,000		
$1,000,000 (incl.) - $2,000,000 (excl.)		
$2,000,000 (incl.) - $3,500,000 (excl.)		
$3,500,000 (incl.) - $5,000,000 (excl.)		
$5,000,000 (incl.) - $10,000,000 (excl.)	Huang, Yee-Wei, Chang, King-Hsiung, Lin, Lung-Wei, Chang, Jr-Neng	Huang, Yee-Wei, Chang, King-Hsiung, Lin, Lung-Wei, Chang, Jr-Neng
$10,000,000 (incl.) - $15,000,000 (excl.)	Chern, Kuo-Jong, Huang, Yung-Fang, Lin, Ying-His, Yen, Kuang-Yu, Tsai, Jon-Jinn	Chern, Kuo-Jong, Huang, Yung-Fang, Lin, Ying-His, Yen, Kuang-Yu, Tsai, Jon-Jinn
$15,000,000 (incl.) - $30,000,000 (excl.)	Chiu, Sun-Chien	Chiu, Sun-Chien
$30,000,000 (incl.) - $50,000,000 (excl.)		
$50,000,000 (incl.) - $100,000,000 (excl.)		
$100,000,000 and above		
Total	10	10

3.3 Employee's Compensation for Officers

2019 / Unit: NT$K

Title	Name	Stock	Cash	Total	Percentage of net income after taxes (%)
President	Chiu, Sun-Chien	0	31,309	31,309	0.46%
Chief Operating Officer	Huang, Yung-Fang				
Chief Financial Officer	Chern, Kuo-Jong				
Vice President	Huang, Yee-Wei				
Vice President	Lin, Ying-Hsi				
Vice President	Lin, Lung-Wei				
Vice President	Chang, King-Hsiung				
Vice President	Tsai, Jon-Jinn				
Vice President	Yen, Kuang-Yu				
Controller	Chang, Jr-Neng				

4. Percentage of remuneration and compensation paid to Directors and Officers by the Company and all companies of the consolidated statements accounts for net income after taxes for the recent two years.

Percentage of remuneration and compensation paid to Directors, Supervisors and Officers by the Company and all companies of the consolidated statements accounts for net income after taxes for 2018	Percentage of remuneration and compensation paid to Directors and Officers by the Company and all companies of the consolidated statements accounts for net income after taxes for 2019
4.23%	4.18 %

The 2019 annual remuneration of directors and compensation of employees were decided in accordance with the Company's articles of incorporation. If gained profits within a fiscal year, the Company shall allocate at a maximum of 3% of the profits as directors' remuneration, and allocate no less than 1% of the profits as employees' compensation. The decision for directors' remuneration was based on the board performance evaluation results of such aspects as the participation in the operation, the quality of the board of directors' decision-making, alignment of the goals and missions of the Company, awareness of the duties of a director, management of internal relationship and communication, the director's professionalism and continuing education, internal control, etc. The decision for officers' compensation was based on the performance appraisal indicators such as the length of service and position, performance, contribution to the Company's operation, industry benchmark, the Company's profitability, etc.

The directors' remuneration and officers' compensation were proposed to the board of directors after the resolution based on the

performance evaluation results, the company's operational performance, and future risk exposure approved by the remuneration committee, and processed after the approval of the board of directors. The directors' remuneration and employees' compensation will also be reported at the shareholders' meeting. The Company's remuneration committee and the board of directors will review the remuneration policies of directors and officers in a timely manner based on the actual operating conditions and relevant laws and regulations, in order to balance the company's sustainable operation and risk control.

5. The planning and operation of the succession of board members and senior management:

5.1 Succession planning for board members

There are currently 9 directors (including 3 independent directors) for the Company. The nomination and selection of directors take into account the overall capacity and diversity of the board of directors, and adjust the composition of members according to the results of performance evaluation and the need for substantive operations. The succession planning of the board of directors includes the succession of the senior management of the group, and the recruitment of external professionals with background of business management, law, accounting, industry, technology, or marketing.

5.2 Succession planning for senior management

The succession planning for senior management of the Company is mainly constructed as follows:

(1) Based on the future development strategy, define the positions and talent needs of the company, and review the succession planning regularly in response to changes in operations and strategies.
(2) Develop competent talents with potential and capacities to enter the succession planning talent pool, and establish a comprehensive training mechanism and talent development plan for the talent pool.
(3) Timely promote the mid-level managers as deputies for the high-level managers, and understand the development of the middle-level management through performance appraisal and as a reference for succession planning.

III. Corporate Governance

1. Operation of Board of Directors

Operation of Board of Directors:

The Board of Directors held meetings 4 times in 2019. Attendance status of Directors is as follows:

Title	Name	Attendance in Person	Attendance by Proxy	Attendance Rate (%)	Remarks
Chairman	Cotek Pharmaceutical Industry Co., Ltd. Representative: Yeh, Nan-Horng	4	0	100%	
Vice Chairman	Forehead International Co., Ltd. Representative: Chiu, Sun-Chien	4	0	100%	
Director	Sonnen Limited Representative: Yeh, Po-Len	3	0	75%	
Director	Sonnen Limited Representative: Huang, Yung-Fang	4	0	100%	
Director	Forehead International Co., Ltd. Representative: Chern, Kuo-Jong	4	0	100%	
Director	Ni, Shu-Ching	4	0	100%	
Independent Director	Chen, Fu-Yen	4	0	100%	
Independent Director	Ou Yang, Wen-Han	4	0	100%	
Independent Director	Wang, Chun-Hsiung	4	0	100%	

Other disclosures:

1.1 (1) Securities and Exchange Act §14-3 resolutions:

Date	Resolutions	The Opinions of All Independent Directors and the Company's Actions to the Opinions
Mar. 21, 2019	1. 2018 financial statements and consolidated financial statements 2. The Company intends to loan a fund to a subsidiary 3 Intercompany loans between the Company's subsidiaries 4. The Company's Auditor of financial statements and Audit Fee for 2019 5. 2018 Statement of Internal Control System	All independent directors approved
Apr. 26, 2019	1. Distribution of 2018 Retained Earnings 2. Cash distribution from capital surplus 3. Submit proposal to shareholders meeting to release the Director from non-competition restrictions 4. 2018 business report and 2019 business plan 5. Revise the Company's Article of Incorporation 6. Revise "the Procedures for Financial Derivatives Transactions" 7. Revise "the Procedures for Acquisition or Disposal of Assets" 8. The Company intends to loan funds to subsidiaries	
Oct. 31, 2019	1. The Company plans to build office building and parking construction 2. The Company acquires right-of-use asset of real estate 3. The Company intends to loan a fund to a subsidiary 4. Intercompany loans between the Company's subsidiaries 5. The Company's invested company intends to loan a fund to a Mainland China subsidiary 6. The Company intends to adjust the endorsement guarantee amount for bank loan of subsidiaries 7. The Company intends to endorse the guarantee for a Mainland China subsidiary 8. The Status that the Company regularly evaluates the independence of auditor 9. Establishing or revising principles and regulations related to corporate governance and corporate social responsibility 10. Appointment of corporate governance officer 11. 2020 Annual Audit Plans	

(2) Resolutions of the board of directors with objected or reserved opinions by independent directors and with records or written statements: None.

1.2 Execution of the directors' interests evasion: The directors have avoided the proposal with personal stake.

1.3 The goals for strengthening the powers of the board of directors and performance evaluation:

(1) Set up functions committees: For the purpose of developing supervisory functions and strengthening management mechanisms, the Company has set up audit committee, remuneration committee, and nominating committee.

(2) Enhance corporate governance: The Company has established corporate governance best practice principles, corporate social responsibility best practice principles, and regulations governing the board performance evaluation, and also discloses corporation governance information in accordance with the relevant laws.

2. Board of Directors performance evaluation

2.1 Evaluation cycles: Conducting an internal board performance evaluation every year

2.2 Evaluation periods: From Jan. 1, 2019 to Dec. 31, 2019

2.3 Scope and method of evaluation: The evaluation of the board as a whole, individual board members and functional committees.

2.4 Method of evaluation: The internal evaluation of the board and self-evaluation by individual board members. The units conducting evaluations is nominating committee.

2.5 Criteria of evaluation:

2.5.1 The board of directors performance evaluation

(1) Participation in the operation of the company;
(2) Improvement of the quality of the board of directors' decision making;
(3) Composition and structure of the board of directors;
(4) Election and continuing education of the directors;
(5) Internal control.

2.5.2 The board members performance evaluation

(1) Alignment of the goals and missions of the company;
(2) Awareness of the duties of a director;
(3) Participation in the operation of the company;
(4) Management of internal relationship and communication;
(5) The director's professionalism and continuing education;
(6) Internal control.

2.5.3 Functional committees performance evaluation

(1) Participation in the operation of the company;
(2) Awareness of the duties of the functional committee;
(3) Improvement of quality of decisions made by the functional committee;
(4) Makeup of the functional committee and election of its members;
(5) Internal control.

2.6 Performance evaluation results: The 2019 performance evaluation results of the board, the board members, audit committee, and remuneration committee are all “outstanding”.

3. Operation of Audit Committee

The Audit Committee assists the Board of Directors in performing its supervision functions. It is also responsible for tasks defined by the Company Act, Securities and Exchange Act and other relevant regulations. The operation of Audit Committee is based on the Audit Committee Charter. The Audit Committee shall convene at least once quarterly; 4 meetings were held in 2019. It also maintains good communication channels with the Company’s internal audit manager and the CPA.

The major annual review matters of Audit Committee were as follows:

(1) Financial statements.
(2) Internal control system.
(3) Material transaction of asset acquisition, intercompany loans, and endorsement and guarantee.
(4) The audit plan and implementation of the internal audit unit.
(5) Appointment, remuneration and independence assessment of the CPA.
(6) Establishing or revising principles and regulations related to corporate governance and corporate social responsibility.

.

Operation of Audit Committee:

The Audit Committee held meetings 4 times in 2019. Attendance status of Independent Directors is as follows:

Title	Name	Attendance in Person	Attendance by Proxy	Attendance Rate (%)	Remarks
Independent Director	Ou Yang, Wen-Han	4	0	100%	
Independent Director	Chen, Fu-Yen	4	0	100%	
Independent Director	Wang, Chun-Hsiung	4	0	100%	

Other disclosures:

3.1 (1) Securities and Exchange Act §14-5 resolutions

Date	Resolutions	The Opinions of All Independent Directors and the Company's Actions to the Opinions
Mar. 19, 2019	1. 2018 financial statements and consolidated financial statements. 2. The Company intends to loan a fund to a subsidiary 3. Intercompany loans between the Company's subsidiaries 4. The Company's Auditor of financial statements and Audit Fee for 2019 5. 2018 Statement of Internal Control System	All independent directors approved
Apr. 24, 2019	1. Distribution of 2018 Retained Earnings 2. Cash distribution from capital surplus 3. Submit proposal to shareholders meeting to release the Director from non-competition restrictions 4. 2018 business report and 2019 business plan 5. Revise the Company's Article of Incorporation 6. Revise "the Procedures for Financial Derivatives Transactions" 7. Revise "the Procedures for Acquisition or Disposal of Assets" 8. The Company intends to loan funds to subsidiaries	
Oct. 25, 2019	1. The Company plans to build office building and parking construction 2. The Company acquires right-of-use asset of real estate 3. The Company intends to loan a fund to a subsidiary 4. Intercompany loans between the Company's subsidiaries 5. The Company's invested company intends to loan a fund to a Mainland China subsidiary 6. The Company intends to adjust the endorsement guarantee amount for bank loan of subsidiaries 7. The Company intends to endorse the guarantee	

Date	Resolutions	The Opinions of All Independent Directors and the Company's Actions to the Opinions
	for a Mainland China subsidiary 8. The Status that the Company regularly evaluates the independence of auditor 9. Establishing or revising principles and regulations related to corporate governance and corporate social responsibility 10. Appointment of corporate governance officer 11. 2020 Annual Audit Plans	

(2) There was no resolution which was not approved by the Audit Committee but was approved by two thirds or more of all Directors.

3.2 Execution of the independent directors' interests evasion: None.

3.3 The communication between the independent directors and the internal audit manager and the CPA:

The Company's independent directors communicate with the CPA by the way of meetings, discussions, telephone calls or e-mails through the audit committee or separately to discuss the review results of the financial statements and related laws and regulations such as accounting, taxation, and securities management. If major issues occur, a meeting can be convened at any time.

The Company's independent directors communicate with the internal audit manager by the way of meetings, discussions, telephone calls or e-mails through the audit committee or separately to discuss the company's audit-related works, audit reports, and the condition of discovering problems and tracking improvements. If major issues occur, a meeting can be convened at any time.

(1) The major items of communication between the independent directors and the CPA

Date	The Major Items of the Communication	The suggestions of independent directors and the Company's action to the suggestions
Dec. 2, 2019	1. The internal audit report for the third quarter of 2019 and Important review items. 2. Explanation of new accounting principles	No suggestion from independent directors

(2) The major items of communication between the independent directors and the internal audit manager

Date	The Major Items of the Communication	Resolution results
Dec. 12, 2019	2020 Annual Audit Plans	No suggestion from independent directors

4. The state of the company's implementation of corporate governance, and deviation of such implementation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
1. Does the Company establish and disclose the Corporate Governance Best-Practice Principles based on "Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies"?	V		The Company established and disclosed the corporate governance best practice principles based on "Corporate Governance Best Practice Principles for TWSE/TPEx Listed Companies," with a dedicated "Corporate Governance" section on the Company's website for all investors to inquire the Company's corporate governance regulations.	-
2. Shareholding Structure and Shareholders' Rights				
(1) Does the Company establish an internal operating procedure to deal with shareholders' suggestions, doubts, disputes and litigations, and implement based on the procedure?	V		The Company has set up an investor relations team and appointed a professional stock transfer agency to handle matters such as shareholder suggestions or doubts.	-
(2) Does the Company possess the list of its major shareholders as well as the ultimate owners of those shares?	V		The Company regularly collects the shareholdings of directors and officers.	-
(3) Does the Company establish and implement the risk management and firewall system between related companies?	V		The Company and its related companies are all in compliance with the relevant internal control system. The Company also supervises the management strategy, financial and business, and audit management of the subsidiaries in accordance with the management practices of the subsidiaries.	-
(4) Does the Company establish internal rules against insiders trading with undisclosed information?	V		The Company regularly educates and advises directors, officers and all employees that the disclosure of material internal information and the actions that may involve insiders trading are prohibited.	-
3. Composition and Responsibilities of the Board of Directors				
(1) Does the Board develop and implement a diversity policy for the composition of its members?	V		The diversity policy for the Company's board members is as follows: The structure of the Company's board of directors shall be determined by choosing an appropriate number of board members in consideration of business scale, the shareholdings of major shareholders, and practical operational needs. The composition of the board of directors shall be determined by taking diversity into consideration. An appropriate policy on diversity based on	-

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
			the company's business operations, operating dynamics, and long-term development needs shall be formulated and include, without being limited to, the following two general standards: 1. Basic requirements and values: gender, age, nationality, and culture. 2. Professional knowledge and skills: a professional background (e.g., law, accounting, industry, finance, marketing, or technology), professional skills, and industry experience. All members of the board shall have the knowledge, skills, and experience necessary to perform their duties. To achieve the ideal goal of corporate governance, the board of directors shall possess the following abilities: 1. Ability to make operational judgments. 2. Ability to perform accounting and financial analysis. 3. Ability to conduct management administration. 4. Ability to conduct crisis management. 5. Knowledge of the industry. 6. International market perspective. 7. Ability to lead. 8. Ability to make policy decisions. There are nine directors, three of them are independent directors, for the Company. Each director has his or her own professional background, including business management, leadership decision, industry knowledge, financial accounting, international marketing, etc. The specific management objectives of the Company's board member diversity policy are that each of the eight abilities that the board of directors shall possess is at least possessed by five directors, and at least four of the eight abilities are possessed by individual board members. The management objective of diversity policy is reached by the Company's current board of directors and individual board members. The abilities possessed by individual board members of the Company is as note.	

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
(2) Does the Company voluntarily establish other functional committees in addition to the Remuneration Committee and the Audit Committee?	V		The Company has set up nominating committee. Please refer to the operation of nominating committee section disclosed in annual report or the Company's website.	-
(3) Does the Company establish regulations governing the board performance evaluation and its evaluation method, regularly conduct performance evaluation every year, submit the results of performance evaluation to the board of directors, and base the determination of remuneration, the election or nomination of an individual director on the evaluation results?	V		The Company has established regulations governing the board performance evaluation and its evaluation method, regularly conducts performance evaluation every year, submits the results of performance evaluation to the board of directors, and bases the determination of remuneration, the election or nomination of an individual director on the evaluation results. The 2019 performance evaluation results of the board, the board members, audit committee, and remuneration committee are all "outstanding". Please refer to Board of Directors performance evaluation section disclosed in annual report or the Company's website.	-
(4) Does the Company regularly evaluate the independence of accountants?	V		The Company regularly evaluates the performance and independence of the accountants every year and reports the results to the board of directors for approval. The Company's self-assessment of the independence of the accountants mainly includes: 1. The accountants have no significant financial interest in the company; 2. The accountants have no kinship relationship with the senior managers of the company; 3. The accountants shall not hold shares of the company; 4. The accountants shall not concurrently hold the position of the company; 5. The accountants provide independence statement The result of 2019 evaluation is that the independence of the accountants is in line with the Company's standards.	-
4. Does the Company have an adequate number of corporate governance personnel with appropriate qualifications and appoint a chief corporate governance officer to be in charge of corporate governance affairs. (including but not limited to providing data demanded by directors and supervisors, assisting directors and supervisors with legal compliance, handling matters relating to board meetings and shareholders meetings according to laws, and producing minutes of board	V		The Company, approved by the board of directors, has appointed a chief corporate governance officer to be in charge of corporate governance affairs. The main duties include handling of matters relating to board of directors meetings and shareholders meetings in compliance with law, preparation of minutes of the board of directors meetings and shareholders meetings, assistance in onboarding and continuing education of the directors, provision of information required for performance of duties	-

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
meetings and shareholders meetings)?			by the directors, assistance in the directors' compliance of law. The performance of duties for 2019 was as following: 1. Assisted independent directors and directors in performing their duties, provided required information, and arranged directors' further education: (1) Provided onboard directors revision and development of the latest laws and regulations regarding company management field and corporate governance, and updated them regularly. (2) Reviewed the confidential level of relevant information and provided the company information required by the directors, maintained smooth communication between the directors and officers. (3) Assisted in arranging relevant meetings when, in accordance with the corporate governance best-practice principles, independent directors needed to meet with the internal audit supervisor or accountants individually to understand the company's finance and business. (4) Assisted independent directors and directors to formulate annual training plans and arrange courses based on the company's industrial characteristics and directors' academic and professional experience background. 2. Assisted that the procedures and resolutions of board of directors meetings and shareholders meetings were in compliance with laws: (1) Reported to the board of directors, independent directors, and audit committee on the company's corporate governance operations, and confirmed whether the convening of the company's shareholders meetings and board of directors meetings were in compliance with relevant laws and corporate governance best-practice principles. (2) Assisted and reminded the directors of the laws and regulations to be followed when performing duties or making a formal resolution of the board of directors, and made suggestions when the board of directors will make a resolution in violation of the laws. (3) Checked the release of material information on	

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
			important resolutions of the board of directors after the meetings, and ensured the legality and correctness of the content of the material information for the transaction information equality of investors. 3. Informed directors of the agenda for board of directors seven days before the meeting, convened a meeting and provided meeting materials, reminded directors to recuse if there is a conflict of interest in the agenda items in advance, and completed the minutes of the board of directors meetings within 20 days after the meetings. 4. Registered the date of the shareholders meeting in advance in accordance with the law, prepared meeting notices, handbook, meeting minutes within the statutory deadlines, and handled registration of change matters in the revised articles of incorporation or director election. Training situation: Professional training is arranged in accordance with the requirements of "Operation directions for compliance with the establishment of board of directors by TWSE listed companies and the board's exercise of powers".	
5. Does the Company establish a communication channel and build a designated section on its website for stakeholders (including but not limited to shareholders, employee and suppliers), as well as handle all the issues they care for in terms of corporate social responsibilities?	V		The Company has built a designated section on the website for stakeholders, and assigned personnel to be in charge of handling related issues.	-
6. Does the Company appoint a professional shareholder transfer agency to deal with shareholder affairs?	V		The Company appoints Chinatrust Commercial Bank Transfer Agency to deal with shareholder affairs.	-
7. Information Disclosure				
(1) Does the Company have a corporate website to disclose the financial, business, and corporate governance information?	V		The financial, business and corporate governance information has been disclosed on the company's website. Investors can also access the company's material information through the market observation post system.	-
(2) Does the Company have other information disclosure channels (e.g. building an English website, appointing designated people to handle information collection and disclosure, implementing a spokesman system, webcasting investor conferences)?	V		The Company has set up an English website, and has a spokesman for external communication and designated personnel to disclose information about the company and the institutional investor conferences at market observation post system in accordance with the statutory requirements.	-

Evaluation Item	Implementation Status			Deviation from the Corporate Governance Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
(3) Does the Company publish and report its annual financial report within two months after the end of a fiscal year, and publish and report its financial reports for the first, second and third quarters as well as its operating status for each month before the specified deadline?		V	The Company follows Securities and Exchange Act to publish and report its annual financial report and its financial reports for the first, second and third quarters as well as its operating status for each month before the specified deadline.	The Company follows Securities and Exchange Act to publish and report its annual financial report and its financial reports for the first, second and third quarters as well as its operating status for each month before the specified deadline.
8. Is there any other important information to facilitate a better understanding of the Company's corporate governance practices (including but not limited to employee rights, employee wellness, investor relations, supplier relations, rights of stakeholders, directors' and supervisors' training records, the implementation of risk management policies and risk evaluation measures, the implementation of customer relations policies, and purchasing liability insurance for directors and supervisors)?	V		1. The Company provides information on relevant regulations that directors should pay attention to at any time. 2. The directors of the Company attended the board of directors in good condition and all met the requirements of the laws. 3. If the proposal has a stake in the directors, the director is required to evade. 4. The Company has purchased the liability insurance for directors which was approved by the board of directors. 5. The Company protects the legitimate rights and interests of employees in accordance with the provisions of Labor Standards Act, and establishes a good relationship of mutual trust with employees through the welfare system enhancing the stability of employees' lives, and completed educational trainings.	-
9. Please describe the improvement status according to the result of cooperate governance evaluation announced by cooperate governance center of TWSE, and the first priority improving items and measures on non-improving items. In 2019, the Company has improved the followings: 1. Establishing the Corporate Governance Best-Practice Principles; 2. Establishing policy on diversity of the composition of the board of directors; 3. Setting up nominating committee and disclose its operation; 4. Appointing a chief corporate governance officer to be in charge of corporate governance affairs; 5. Establishing regulations governing the board performance evaluation.				

Note: The abilities possessed by individual board members of the Company

	Gender	Ability to make operational judgments	Ability to perform accounting and financial analysis	Ability to conduct management administration	Ability to conduct crisis management	Knowledge of the industry	International market perspective	Ability to lead	Ability to make policy decisions
Yeh, Nan-Horng	Male	v	v	v	v	v	v	v	v
Chiu, Sun-Chien	Male	v	v	v	v	v	v	v	v
Yeh, Po-Len	Male	v	v	v	v	v	v	v	v
Huang, Yung-Fang	Male	v		v	v	v	v	v	v
Chern, Kuo-Jong	Male	v	v	v	v	v	v	v	v
Ni, Shu-Ching	Female	v	v		v		v		v
Ou Yang, Wen-Han	Male	v	v	v	v	v	v	v	v
Chen, Fu-Yen	Male	v		v	v		v	v	v
Wang, Chun-Hsiung	Male	v		v	v		v	v	v

5. Members Background and Operation of Remuneration Committee:

5.1. Members Background of the Remuneration Committee

Title	Criteria / Name	Possess five or more years of experience and the following professional qualifications			Independence Status (Note 2)										Number of other public companies concurrently serving as an independent director	Remarks
		An instructor or higher in a department of commerce, law, finance, accounting, or other academic department related to the business needs of the company in a public or private junior college, college, or university.	A judge, public prosecutor, attorney, certified public accountant, or other professional or technical specialist who has passed a national examination and been awarded a certificate in a profession necessary for the business of the company.	Have work experience in the area of commerce, law, finance, or accounting, or otherwise necessary for the business of the company.	1	2	3	4	5	6	7	8	9	10		
Independent Director	Chen, Fu-Yen			v	v	v	v	v	v	v	v	v	v	v	0	
Other	Kao, Chih-Chun			v	v	v	v	v	v	v	v	v	v	v	0	
Independent Director	Wang, Chun-Hsiung			v	v	v	v	v	v	v	v	v	v	v	0	

Note 1: Title should be directors, independent directors, or others.
Note 2: "V" indicates the conditions listed met during the member's terms and two years prior.

(1) Not an employee of the company or any of its affiliates.

(2) Not a director or supervisor of the company or any of its affiliates. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(3) Not a natural-person shareholder who holds shares, together with those held by the person's spouse, minor children, or held by the person under others' names, in an aggregate amount of one percent or more of the total number of issued shares of the company or ranking in the top 10 in holdings.

(4) Not a spouse, relative within the second degree of kinship, or lineal relative within the third degree of kinship, of any of the persons in the preceding three subparagraphs.

(5) Not a director, supervisor, or employee of a corporate shareholder that directly holds five percent or more of the total number of issued shares of the company or of a corporate shareholder that ranks among the top five in shareholdings. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(6) Not a director, supervisor or employee of another companies controlled by the same person with more than half of directors or voting shares of the company and another companies. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(7) Not a director, supervisor or employee of another companies or institutions who are the same person or spouse as the company's chairman, president or equivalent. (The same does not apply, however, in cases where the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(8) Not a director, supervisor, officer, or shareholder holding five percent or more of the shares, of a specified company or institution that has a financial or business relationship with the company. (The same does not apply, however, in cases where the specified company or institution holds 20 percent or more and no more than 50

percent of the total number of issued shares of the company, and the person is an independent director of the company, its parent company, or any subsidiary, as appointed in accordance with the Act or with the laws of the country of the parent or subsidiary.)

(9) Not a professional individual who, or an owner, partner, director, supervisor, officer or their spouse of a sole proprietorship, partnership, company, or institution that, provides audit or commercial, legal, financial, or accounting services with remuneration in the past two years with cumulative amounts exceeding NT$ 500,000 to the company or to any affiliate of the company. However, this restriction does not apply to a member of the remuneration committee, public tender offer review committee, or special committee for merger/consolidation and acquisition, who exercises powers pursuant to the Act or to the Business Mergers and Acquisitions Act or related laws or regulations.

(10) Not under any condition pursuant to Article 30 of the Company Act.

5.2. Operation of Remuneration Committee status

1. There are 3 members of the Remuneration Committee.
2. Current members term of office: July 25, 2018 to July 24, 2021.
   The current Remuneration Committee held meetings 2 times in 2019. Attendance status of members is as follows:

Title	Name	Attendance in Person	Attendance by Proxy	Attendance Rate (%)	Remarks
Convener	Wang, Chun-Hsiung	2	0	100%	
Member	Kao, Chih-Chun	2	0	100%	
Member	Chen, Fu-Yen	2	0	100%	

Other disclosures:

1. If advice of the Remuneration Committee was not adopted or modified by the Board of Directors, the meeting date, period, content of proposals, meeting resolution, and the Company's action to the advices of the Remuneration Committee should be disclosed: None
2. If resolutions of the Remuneration Committee were objected or reserved with records or written statements by any member, the meeting date, period, content of proposals, opinions of all members, and action to the member's opinions should be disclosed: None
3. The discussion item and resolution results of the Remuneration Committee, and the Company's action to the advices of the Remuneration Committee:

Date	Content of proposals	Resolution results	The Company's action to the advices of the Remuneration Committee
Mar. 19, 2019	1. Ratify the employees' compensation for officers of 2017. 2. Approve the distribution of 2018 directors' remuneration and officers' compensation. 3. Approve 2019 officers' salary adjustments.	Approved by all members of the committee.	Processed as the resolution results of the remuneration committee.
Oct. 18, 2019	1. Approve 2019 year-end bonus principle for officers.	Approved by all members of the committee.	Processed as the resolution results of the remuneration committee.

6. **Operation of Nominating Committee**

6.1 The Company established Nominating Committee in October 2019. The committee is composed of three independent directors. The convener and chairman, Ou Yang, Wen-Han, possesses the abilities of financial analysis and management administration. The independent directors, Chen, Fu-Yen and Wang, Chun-Hsiung, possess the abilities of management administration and leadership. The professional abilities required by the Committee are all matched.
The major duties of nominating committee are as follows:
(1) Laying down the standards of independence and a diversified background covering the expertise, skills, experience, gender, etc. of members of the board, and finding, reviewing, and nominating candidates for directors based on such standards.
(2) Establishing and developing the organizational structure of the board and each committee, and evaluating the performance of the board, each director, and each committee.
(3) Establishing and reviewing on a regular basis programs for the succession plans of directors and senior executives.

6.2 There are 3 members of the Nominating Committee.

6.3 Current term of office: 2019/10/31 to 2021/06/04. The Nominating Committee held meeting 1 time in 2019. Attendance status of members is as follows:

Title	Name	Attendance in Person	Attendance by Proxy	Attendance Rate (%)	Remarks
Convener	Ou Yang, Wen-Han	1	0	100%	
Member	Chen, Fu-Yen	1	0	100%	
Member	Wang, Chun-Hsiung	1	0	100%	

6.4 The discussion items and resolution results of the Nominating Committee:

Date	Content of proposals	Resolution results	The Company's action to the resolutions of the nominating Committee
Oct. 31,2019	1. Election of convener and chairman of first nominating committee. 2. Conduct 2019 Board of Directors performance evaluation.	Approved by all members of the committee.	Processed as the resolution results of the nominating committee.

7. Implementing Corporate Social Responsibility

Assessment Item	Implementation Status			Deviation from the "Corporate Social Responsibility Best Practice Principles for TWSE/GTSM-Listed Companies" and Reasons
	Yes	No	Summary	
1. On the basis of the materiality principle, does the Company give due consideration to the environment, society and corporate governance in its business operations, and establish related risk management policies or strategies?	✓		The Company gives due consideration to the environment, society and corporate governance in its business operations, and establishes related risk management policies or strategies.	-
2. Does the Company establish a full-time (or part-time) dedicated unit tor the purpose of managing corporate social responsibility initiatives, and does the Board of Directors appoint executive-level positions with responsibility for handling such initiatives? Is the status of the handling reported back to the Board?	✓		The Administration Department manages corporate social responsibility initiatives.	-
3. Environmental Issues (1) Does the Company establish proper environmental management systems based on the characteristics of its industries? (2) Does the Company endeavor to utilize all resources more efficiently and use renewable materials which have a low impact on the environment? (3) Does the Company monitor the impact of climate change on present and future operations and evaluate related opportunities? Does it establish measures to respond to climate change related impacts? (4) Does the Company take inventories of greenhouse gas emissions, water use, and waste volume during the past two years? Does it adopt guidelines to conserve energy and reduce carbon and greenhouse gases	✓ ✓ ✓ ✓		The Company has established proper environmental management systems and passed ISO 14001 certification. The Company endeavors to use resources more efficiently and to use renewable materials. The Company monitors the impact of climate change and formulates response plans and actions that are comprehensive and effective. The Company endeavors to implement environmental protection policies, including measuring total electricity usage, total water	- - - -

emissions, water use, and waste generation?			usage, and total waste generation. It conserves energy and reduces carbon as well as other greenhouse gases by replacing old electronics and other equipment with more efficient models.	
4. Social Issues				
(1) Does the Company comply with relevant laws and regulations and the International Bill of Human Rights? Does it adopt relevant management policies and processes?	✓		The Company adopts management policies and processes in accordance with relevant laws and regulations.	-
(2) Does the Company establish and implement appropriate remuneration mechanisms (including wages, vacation, and other benefits) and reflect the corporate business performance or achievements in the employee remuneration policy?	✓		The Company establishes and implements appropriate employee welfare mechanisms as well as appropriate wage and remuneration, so that employees can share the Company's operational achievements.	-
(3) Does the Company provide safe and healthful work environments for employees, and does it organize training on safety and health for employees on a regular basis?	✓		The Company actively and diligently provides safe and healthful work environments for all employees in accordance with domestic and international work safety laws and regulations, to put people's minds at ease. At the same time, it regularly seeks to improve work safety policies and procedures.	-
(4) Does the Company establish effective training programs to foster employees' career skills?	✓		The Company teaches organizational sustainable development goals and supports employee occupational development through Realtek Corporate University. This provides employees with a systematic, planned professional learning experience that is expansive and in-depth.	-
(5) Does the Company follow the laws and regulations of the government and international guidelines in relation to customer health, safety, and privacy, as well as sales and labeling of its products and services? Does the Company establish policies to protect consumer	✓		The Company follows the laws and regulations of the government and international guidelines in relation to customer	-

rights and interests and provide a clear and effective procedure for accepting consumer complaints? (6) Does the Company establish policies to assess whether suppliers adhere to environmental, occupational health and safety, and labor rights laws and regulations, then follow up on implementation status?	✓		health, safety, and privacy, as well as sales and labeling of its products and services, in order to protect the rights and interests of consumers. The Company establishes policies that require suppliers to adhere to environmental, occupational health and safety, and labor rights laws and regulations.	
5. Does the Company adopt internationally recognized standards or guidelines when producing corporate social responsibility reports and other related reports to disclose the status of implementing non-finance related policies? Does the Company obtain a third-party assurance or verification for the reports to enhance the reliability of the information in the reports?	✓		Realtek publishes corporate social responsibility reports in accordance with Global Reporting Initiative standards. Besides regularly disclosing the Company's economic performance to observers, it publicly discloses operational achievements of non-finance related issues, such as business integrity, stakeholder relations, environmental topics, workplace safety, and social participation. Realtek commissioned SGS Taiwan to review and verify its 2019 corporate social responsibility report.	-
6. If the company has established its corporate social responsibility code of practice according to "Corporate Social Responsibility Best Practice Principles for TWSE-GTSM-Listed Companies," please describe the operational status and differences: Realtek establishes its corporate social responsibility code of practice in accordance with the "Corporate Social Responsibility Best Practice Principles for TWSE/GTSM-Listed Companies." Its operations and corporate social responsibility spirit and principles adhere to this statute.				
7. Other important information to facilitate better understanding of the company's implementation of corporate social responsibility: The Company actively participates in social welfare activities and actions, through sponsorships, donations to educational funds and training, the hiring of people with disabilities, and other deeds.				

8. The state of the company's performance in the area of ethical corporate management and the adoption of related measures

The Ethical Corporate Management Implementation Status and Deviation from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.

Evaluation Item	Implementation Status			Deviation from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
1. Establishment of ethical corporate management policies and programs				
(1) Does the company establish its ethical corporate management policies approved by the board of directors, and clearly specify in their rules and external documents the ethical corporate management policies and practices, and the commitment by the board of directors and senior management on rigorous and thorough implementation of such policies?	V		The Company, approved by the board of directors, has established relevant regulations on ethical corporate management, such as codes of ethical conduct, codes of employee conduct, and measures to report illegal or unethical behavior, and has disclosed them on the corporate governance section of the Company's website as ethical corporate management policies for directors, managers and all employees to follow.	-
(2) Does the company establish a risk assessment mechanism against unethical conduct, analyze and assess on a regular basis business activities within business scope which are at a higher risk of being involved in unethical conduct, and establish prevention programs which at least include preventive measures against the conducts listed in article 7, paragraph 2 of Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies?	V		The Company's relevant regulations on ethical corporate management, such as codes of ethical conduct, codes of employee conduct, and measures to report illegal or unethical behavior, have covered a risk assessment mechanism against unethical conducts and preventive measures against unethical conducts.	-
(3) Does the company clearly specify operational procedures, guidelines, well-defined disciplinary and appeal system for handling violations in the prevention programs against unethical conducts, implement such programs rigorously, and regularly review and correct the programs?	V		The Company clearly specifies operational procedures, guidelines, well-defined disciplinary and appeal system for handling violations in the prevention programs against unethical conducts. The compliance situation is checked by internal audit unit. The company also reviews the measures when necessary.	-
2. Implement ethical corporate management				
(1) Does the company evaluate business partners' ethical records and include ethics-related clauses in business contracts?	V		The Company regularly conducts quality and credit evaluations for suppliers and customers. For those who have not passed the rating, they will be removed from the cooperation list.	-

Evaluation Item	Implementation Status			Deviation from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
(2) Does the company establish an exclusively dedicated unit under the board of directors, which report to the board of directors on a regular basis (at least once a year) for establishing and supervising the implementation of the ethical corporate management policies and prevention programs?	V		The internal auditing units of the Company regularly submit audit reports to the Board of Directors.	-
(3) Does the company establish policies to prevent conflicts of interest and provide appropriate communication channels, and implement the policies?	V		The Company's codes of ethical conduct and codes of employee conduct have covered policies to prevent conflicts of interest and communication channels for directors, managers and all employees to follow.	-
(4) Does the company establish effective systems for both accounting and internal control systems to facilitate ethical corporate management, and the internal audit unit, based on the result of assessment of the risk of involvement in unethical conduct, devise relevant audit plans and examine accordingly the compliance with the prevention programs, or engage a certified public accountant to carry our the audit?	V		The Company has established accounting systems, internal control systems and internal auditing systems in accordance with various regulations. The auditors, based on the result of assessment of the risk of involvement in unethical conduct, devise relevant audit plans to examine the compliance with the prevention programs against unethical conducts, and report to the board of directors on a regular basis.	-
(5) Does the company regularly hold internal and external educational trainings of ethical corporate management?	V		The Company's relevant regulations on ethical corporate management, such as codes of ethical conduct, codes of employee conduct, and measures to report illegal or unethical behavior, are disclosed on the corporate governance section of the Company's website as ethical corporate management policies for directors, managers and all employees to follow.	-
3. Implementation status of the whistle-blowing system				
(1) Does the company establish a concrete whistle-blowing system and incentive measures, create a convenient way for reporting, and appoint appropriate designated personnel for reported cases?	V		The Company has established measures to report illegal or unethical behavior, created the way for reporting and appointed appropriate designated unit for reported cases.	-
(2) Does the company establish standard operating procedures, follow-up measures to be taken after the investigation is completed, and related confidentiality measures for reported cases?	V		The Company's measures to report illegal or unethical behavior has covered standard operating procedures, follow-up measures to be taken after the investigation is completed, and related confidentiality measures for	-

Evaluation Item	Implementation Status			Deviation from the Ethical Corporate Management Best-Practice Principles for TWSE/TPEx Listed Companies and the reason for deviation.
	Yes	No	Summary Description	
(3) Does the company adopt measures for protecting whistle-blowers from inappropriate disciplinary actions due to their whistle-blowing?	V		reported cases. The Company will take the necessary protective measures for the whistle-blowers, and promises that the Company's employees will not be subject to inappropriate disciplinary actions due to their whistle-blowing.	-
4. Strengthening information disclosure Does the company disclose its ethical corporate management principles and the results of performance on the company's website and MOPS?	V		The Company's relevant regulations on ethical corporate management, such as codes of ethical conduct, codes of employee conduct, and measures to report illegal or unethical behavior, are disclosed on the Company's website and MOPS, and are operated scrupulously.	-
5. If the Company has established Principles of Ethical Corporate Management based on Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies, please describe any deviation between the implementation and the principles. The Company has established relevant regulations on ethical corporate management, such as codes of ethical conduct, codes of employee conduct, and measures to report illegal or unethical behavior. No deviation is between the operation and the regulations.				
6. Other important information to facilitate a better understanding of the company's ethical corporate management implementation: (e.g., review and amend the company's principles) The Company complies with related laws and regulations including Company Act, Securities and Exchange Act, Business Entity Accounting Act, etc. to implement ethical corporate management.				

9. If the company has established corporate governance best-practice principles or related regulations, disclose the method of searching:
The Company's Corporate Governance Best-Practice Principles and relevant regulations can be found on the corporate governance section of the Company's website or Market Observations Post System.

10. Other important information to facilitate a better understanding of the state of the company's implementation of corporate governance may also be disclosed:
The company in time discloses material information in accordance with regulations, and regularly holds institutional investor conference to present financial and business related information.

11. Internal Control Status

11.1. Statement of internal control

Realtek Semiconductor Corporation
Statement of Internal Control System

Date: March 20, 2020

Based on the findings of a self-assessment, Realtek Semiconductor Corporation (Realtek) states the following with regard to its internal control system during the year 2019:

1. Realtek's board of directors and management are responsible for establishing, implementing, and maintaining an adequate internal control system. Our internal control is a process designed to provide reasonable assurance over the effectiveness and efficiency of our operations (including profitability, performance and safeguarding of assets), reliability, timeliness, transparency of our reporting, and compliance with applicable rulings, laws and regulations.
2. An internal control system has inherent limitations. No matter how perfectly designed, an effective internal control system can provide only reasonable assurance of accomplishing its stated objectives. Moreover, the effectiveness of an internal control system may be subject to changes due to extenuating circumstances beyond our control. Nevertheless, our internal control system contains self-monitoring mechanisms, and Realtek takes immediate remedial actions in response to any identified deficiencies.
3. Realtek evaluates the design and operating effectiveness of its internal control system based on the criteria provided in the Regulations Governing the Establishment of Internal Control Systems by Public Companies (herein below, the "Regulations"). The Criteria adopted by the Regulations identify five key components of managerial internal control: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring activities.
4. Realtek has evaluated the design and operating effectiveness of its internal control system according to the aforesaid Regulations.
5. Base on the findings of such evaluation, Realtek believes that, on December 31, 2019, it has maintained, in all material respects, an effective internal control system (that includes the supervision and management of our subsidiaries), to provide reasonable assurance over our operational effectiveness and efficiency, reliability, timeliness, transparency of reporting, and compliance with applicable rulings, laws and regulations.
6. This Statement is an integral part of Realtek's annual report for the year 2019 and prospectus, and will be made public. Any falsehood, concealment, or other illegality in the content made public will entail legal liability under Articles 20, 32, 171, and 174 of the Securities and Exchange Law.
7. This statement was passed by the board of directors in their meeting held on March 20, 2020, with none of the nine attending directors expressing dissenting opinions, and the remainder all affirming the content of this Statement.

Realtek Semiconductor Corporation

Chairman: Yeh, Nan-Horng
President: Chiu, Sun-Chien

11.2. The Company was not required to commission an independent auditor to audit its internal control system.

12. Reprimand of the Company and its employees according to the laws; reprimand of the Company's employees for violating regulations of the internal control system, and major shortcomings and status of correction from last year to the date of the annual report printed: None

13. Major resolutions of the shareholders' meeting and the board meetings from last year to the date of the annual report printed:

13.1. Major resolutions of 2019 shareholders' meeting:

Date	Proposals	Resolution Results And Implementation
June 12, 2019	Ratification Items 1. 2018 business report and financial statements	Approved
	2. Distribution of 2018 retained earnings	Approved Dividend record date: 2019/09/11 Payment date: 2019/10/09 Amount: NT$3,048,572,784
	Discussion Item 1. Cash distribution from capital surplus	Approved Distribution record date: 2019/09/11 Payment date: 2019/10/09 Amount: NT$508,095,464
	2. To revise the Articles of Incorporation	Approved Obtained the approval letter for registration change: 2019/06/19

13.2. Major Resolutions of Board Meetings

Date	Summary of Major Resolutions	Resolution Results
Mar. 21, 2019	1. 2018 financial statements and consolidated financial statements. 2. Matter of 2019 shareholders' meeting's date, time, location, and agenda 3. Adoption of the shareholders' proposals for 2018 shareholders' meeting 4. Employees' compensation and Directors' remuneration of 2018 5. Ratify the employees' compensation for officers of 2017 6. The Company intends to loan a fund to a subsidiary 7. Intercompany loans between Company's subsidiaries 8. The Company's Auditor of financial statements and Audit Fee for 2019 9. 2018 Statement of Internal Control System	Approved by all attending directors
Apr. 26, 2019	1. Distribution of 2018 Retained Earnings 2. Cash distribution from capital surplus 3. Release the Director from non-competition restrictions 4. Revise 2018 shareholders' meeting's agenda 5. 2018 business report and 2019 business plan 6. Revise the Company's Article of Incorporation 7. Revise the Procedures for Financial Derivatives Transactions 8. Revise the Procedures for Acquisition or Disposal of Assets 9. The Company intends to loan funds to subsidiaries	Approved by all attending directors
Jul. 31, 2019	1. The Company plans to add a new medical device product line 2. Revise the Company's Article of Incorporation 3. The Company newly established " Intelligent Decision Research Center"	Approved by all attending directors
Oct. 31, 2019	1. The Company plans to build office building and parking construction 2. The Company acquires right-of-use asset of real estate 3. To reviews the year-end bonus rules for officers 4. The Company intends to loan a fund to a subsidiary 5. Intercompany loans between Company's subsidiaries 6. Company's invested companies intend to loan funds to Mainland China subsidiaries 7. The Company intends to adjust the endorsement guarantee limit for bank borrowings of subsidiaries 8. The Company intends to endorse the guarantee for a Mainland China subsidiary 9. The Status that the Company regularly evaluates the independence of auditor 10. Establishing or revising principles and regulations related to corporate governance and corporate social responsibility 11. Electing members of the Nomination Committee 12. Appointment of Corporate Governance Officer 13. 2019 Annual Audit Plans	Approved by all attending directors
Feb. 21,2020	1. To approve property purchase 2. The Company's Auditor of financial statements and Audit Fee for 2020	

Date	Summary of Major Resolutions	Resolution Results
Mar. 20,2020	1. 2019 financial statements and consolidated financial statements 2. Matters of convening 2020 shareholders' meeting 3. Adoption of the shareholders' proposals for 2020 shareholders' meeting 4. Employees' compensation and Directors' remuneration of 2019 5. The Company intends to loan a fund to a subsidiary 6. To revise the Articles of Incorporation 7. To revise provisions of the Company's internal regulations. 8. To revise the written system of internal control of the Company. 9. 2019 Statement of Internal Control System 10. The Company created "Corporate Technology Center" department and organization changes of R&D center	Approved by all attending directors
Apr. 24,2020	1. Distribution of 2019 Retained Earnings 2. 2019 cash dividends distribution from retained earnings 3. Cash distribution from capital surplus 4. 2019 business report and 2020 business plan 5. The Company plans to build factory & office buildings 6. The Company intends to loan a fund to a subsidiary	Approved by all attending directors

14. Directors' objections against the important resolution of board meetings from last year to the date of the annual report printed: None

15. Information of resignation or dismissal of the persons related to the financial reports (including chairman, president, accounting officers, finance officers, internal audit manager, and R&D officers) from last year to the date of the annual report printed: None

IV. Information Regarding Audit Fees

Accounting Firm	Name of CPA		Period Covered by CPA's Audit	Remarks
PricewaterhouseCoopers Taiwan	Hsueh, Seou-Hung	Li, Tien-Yi	2019/01/01~2019/03/21	
PricewaterhouseCoopers Taiwan	Lin, Yu-Kuan	Tsang, Kwok-Wah	2019/03/22~2019/12/31	-

Unit: NT$K

Range \ Items		Audit Fee	Non-audit Fee	Total
1	Less than $2,000,000		✓	
2	$2,000,000 (incl.) - $4,000,000			
3	$4,000,000 (incl.) - $6,000,000	✓		✓
4	$6,000,000 (incl.) - $8,000,000			
5	$8,000,000 (incl.) - $10,000,000			
6	$100,000,000 and above			

1. Non-audit fee paid to the auditors, the audit firm and its affiliates accounted for not less than one-fourth of total audit fee: For 2019, the non-audit fee paid to the auditors, the audit firm and its affiliates was 0.
2. Replaced the audit firm and the audit fee paid to the new audit firm was less than the payment of previous year: Not applicable.
3. Audit fee reduced not less than 10% previous year: Not applicable.

V. Replacement of Independent Auditors

1. Regarding the former CPA

<table>
<tr><td>Replacement Date</td><td colspan="5">February 21, 2020</td></tr>
<tr><td>Replacement reasons and explanations</td><td colspan="5">The internal regular rotation of PricewaterhouseCoopers Taiwan</td></tr>
<tr><td rowspan="3">Describe whether the Company terminated or the CPA rejected the appointment</td><td colspan="3">Parties
Status</td><td>CPA</td><td>The Company</td></tr>
<tr><td colspan="3">Appointment terminated automatically</td><td>Not applicable</td><td>Not applicable</td></tr>
<tr><td colspan="3">Appointment rejected (continued)</td><td>Not applicable</td><td>Not applicable</td></tr>
<tr><td>The Opinions other than Unmodified Opinion Issued in the Last Two Years and the Reasons for the Said Opinions (Note)</td><td colspan="5">None</td></tr>
<tr><td rowspan="6">Is there any disagreement in opinion with the Company</td><td rowspan="4">YES</td><td></td><td colspan="3">Accounting principles or practices</td></tr>
<tr><td></td><td colspan="3">Disclosure of Financial Statements</td></tr>
<tr><td></td><td colspan="3">Audit scope or steps</td></tr>
<tr><td></td><td colspan="3">Others</td></tr>
<tr><td>No</td><td colspan="4">✓</td></tr>
<tr><td colspan="5">Explanation</td></tr>
<tr><td>Supplementary Disclosure</td><td colspan="5">None</td></tr>
</table>

2. Regarding the Successor CPA

Name of accounting firm	PricewaterhouseCoopers Taiwan
Name of CPA	Lin, Yu-Kuan; Cheng, Ya-Huei
Date of appointment	February 21, 2020
Prior to the Formal Engagement, Any Inquiry or Consultation on the Accounting Treatment or Accounting Principles for Specific Transactions, and the Type of Audit Opinion that the CPA might issue on the Financial Report.	None
Written Opinions from the Successor CPA are different from the Former CPA's opinions.	None

VI. If the Company's Chairman, President, Managers in charge of finance or accounting operations held positions within the auditor's firm or its affiliates during last year, the name, title, and period of holding positions should be disclosed: None

VII. Share transfer or share pledge of Directors, Officers and major shareholders holding more than 10% shares from last year to the date of the annual report printed.

1. Changes in shareholding of Directors, Officers and major shareholders

Title	Name	2019		As of April 12, 2020	
		Shares increased (decreased)	Pledge shares increased (decreased)	Shares increased (decreased)	Pledge shares increased (decreased)
Chairman	Cotek Pharmaceutical Industry Co., Ltd. Representative: Yeh, Nan-Horng	-	5,050,000	—	1,000,000
Vice Chairman	Forehead International Co., Ltd. Representative: Chiu, Sun-Chien	(1,160,000)	-	-	-
Director	Forehead International Co., Ltd. Representative: Chern, Kuo-Jong				
Director	Sonnen Limited Representative: Yeh, Po-Len	-	-	-	-
Director	Sonnen Limited Representative: Huang, Yung-Fang	-	-	-	-
Director	Ni, Shu-Ching	-	-	-	-
Independent Director	Chen, Fu-Yen	-	-	-	-
Independent Director	Wang, Chun-Hsiung	-	-	-	-
Independent Director	Ou Yang, Wen-Han	-	-	-	-
President	Chiu, Sun-Chien	-	-	(18,000)	-
Chief Operating Officer	Huang, Yung-Fang	-	-	-	-
Chief Financial Officer	Chern, Kuo-Jong	-	-	-	-
Vice President	Huang, Yee-Wei	-	-	-	-
Vice President	Lin, Ying-Hsi	-	-	-	-
Vice President	Lin, Lung-Wei	-	-	-	-
Vice President	Chang, King-Hsiung	-	-	-	-
Vice President	Tsai, Jon-Jinn	-	-	-	-
Vice President	Yen, Kuang-Yu	-	-	-	-
Controller	Chang, Jr-Neng	-	-	-	-

2. Information on stock transfer to related parties: None.

3. Information on pledge of shares to related parties: None.

VIII. The relationship between any of the Company's top ten shareholders:

April 12, 2020

Name	Shareholding		Spouse & Minor Shareholding		Shareholding by Nominee Arrangement		Top Ten Shareholders who are Related Parties, Spouse, or Second-Degree Relatives	
	Shares	%	Shares	%	Shares	%	Name	Relationship
Cathay Life Insurance Company, Ltd.	23,531,000	4.61%	-	-	-	-	-	-
Representative: Huang, Tiao-Kuei	-	-	-	-	-	-	-	-
Cotek Pharmaceutical Industry Co., Ltd.	22,146,604	4.34%	-	-	-	-	-	-
Representative: Yeh, Chia-Wen	-	-	-	-	-	-	-	-
Supervisory Committee of the Labor Retirement Fund-New Labor Retirement Fund	13,297,348	2.60%	-	-	-	-	-	-
Leicester Worldwide Corporation	12,616,184	2.47%	-	-	-	-	-	-
Supervisory Committee of the Labor Retirement Fund-Labor Retirement Fund	9,077,000	1.78%	-	-	-	-	-	-
JPMorgan Chase Bank N.A. ,Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	8,328,988	1.63%	-	-	-	-	-	-
Nan Shan Life Insurance Co., Ltd	7,935,000	1.55%	-	-	-	-	-	-
Representative: Du, Ying-Zong	-	-	-	-	-	-	-	-
Enable Educational Technology Co., Ltd.	7,781,000	1.52%	-	-	-	-	-	-
Representative: Yeh, Wei-Ting	-	-	-	-	-	-	-	-
Chunghwa Post Co., Ltd.	7,584,856	1.49%	-	-	-	-	-	-
Representative: Wu, Hong-Mo	-	-	-	-	-	-	-	-
Vanguard Emerging Markets Stock Index Fund, A Series Of Vanguard International Equity Index Funds	6,913,539	1.35%	-	-	-	-	-	-

IX. The consolidated shareholdings and percentage of investments held by the Company, Directors, Officers, and the companies controlled directly or indirectly by the Company.

December 31, 2019 / Unit: shares: %

Investments	Investments of the Company		Investments directly or indirectly held by Directors, Officers, and the companies controlled directly or indirectly by the Company		Consolidated Investments	
	Shares	%	Shares	%	Shares	%
Leading Enterprises Limited	39,130	100%	—	—	39,130	100%
Amber Universal Inc.	41,432	100%	—	—	41,432	100%
Realtek Singapore Private Limited	80,000,000	89.03%	9,856,425	10.97%	89,856,425	100%
Realtek Investment Singapore Private Limited	200,000,000	100%	—	—	200,000,000	100%
Talent Eagle Enterprise Inc.	114,100,000	100%	—	—	114,100,000	100%
Bluocean Inc.	110,050,000	100%	—	—	110,050,000	100%
Realsun Investments Co., Ltd	28,000,000	100%	—	—	28,000,000	100%
Hung-wei Venture Capital Co., Ltd	25,000,000	100%	—	—	25,000,000	100%
Realking Investments Limited	29,392,985	100%	—	—	29,392,985	100%
Realsun Technology Corporation	500,000	100%	—	—	500,000	100%
Bobitag Inc.	1,918,910	66.67%	—	—	1,918,910	66.67%
Technology Partner V Venture Capital Corp.	4,178,509	32.43%	487,493	3.78%	4,666,002	36.21%
5V Technologies,Taiwan Ltd.	46,699	24.42%	—	—	46,699	24.42%
EstiNet Technologies Inc.	4,000,000	16.10%	—	—	4,000,000	16.10%

Note: The aforementioned are long-term investments under the equity method.

Capital Raising

I. Source of Capital

Year & Month	Issuing Price	Authorized		Paid-in		Remarks		
		Shares (K)	Amount ($K)	Shares (K)	Amount ($K)	Source of Equity	Capital increase by assets other than cash	Other
09/2017	10	890,000	8,900,000	506,506	5,065,062	Employees' compensation	-	Note 1
04/2018	10	890,000	8,900,000	508,095	5,080,955	Employees' compensation	-	Note 2
04/2020	10	890,000	8,900,000	510,685	5,106,849	Employees' compensation	-	Note 3

Note 1: The capitalization was approved by the Hsinchu Science Park Administration on Sep. 25, 2017 with an approval letter of No. 1060026285.

Note 2: The capitalization was approved by the Hsinchu Science Park Administration on Apr 11, 2018 with an approval letter of No. 1070010727.

Note 3: The capitalization was approved by the Hsinchu Science Park Administration on Apr 20, 2020 with an approval letter of No. 1090010606.

Type of share	Authorized Capital			Remarks
	Outstanding Shares	Un-issued Shares	Total	
Common stock	510,684,875	379,315,125	890,000,000	Note

Note: The authorized capital retains 80,000,000 shares for the issue of employee warrant shares.
Shelf Registration: Not Applicable.

II. Structure of Shareholders

April 12, 2020

Structure of Shareholders	Government Institutions	Financial Institutions	Other Institutional Investors	Foreign Institutional & Individual Investors	Individual Investors	Total
Number of Shareholders	1	31	398	1,107	42,660	44,197
Shareholdings	10,406	54,634,120	79,808,198	298,416,571	77,815,580	510,684,875
Shareholding Percentage	0.00%	10.70%	15.63%	58.43%	15.24%	100.00%

III. Distribution of Shareholding

April 12, 2020

Category	Number of Shareholders	Shareholdings	Shareholding Percentage
1 to 999	31,543	2,367,451	0.46%
1,000 to 5,000	9,961	17,582,308	3.44%
5,001 to 10,000	981	7,097,754	1.39%
10,001 to 15,000	338	4,073,515	0.80%
15,001 to 20,000	151	2,718,209	0.53%
20,001 to 30,000	202	5,011,476	0.98%
30,001 to 40,000	118	4,125,349	0.81%
40,001 to 50,000	103	4,690,007	0.92%
50,001 to 100,000	253	17,901,588	3.51%
100,001 to 200,000	179	25,453,662	4.98%
200,001 to 400,000	165	46,692,496	9.14%
400,001 to 600,000	54	27,170,649	5.32%
600,001 to 800,000	37	25,388,060	4.97%
800,001 to 1,000,000	20	17,805,012	3.49%
1,000,001 and above	92	302,607,339	59.26%
Total	44,197	510,684,875	100.00%

IV. List of Major Shareholders

April 12, 2020

Shareholding / Shareholder	Shareholdings	Percentage of Shareholding
Cathay Life Insurance Company, Ltd.	23,531,000	4.61%
Cotek Pharmaceutical Industry Co., Ltd.	22,146,604	4.34%
Supervisory Committee of the Labor Retirement Fund-New Labor Retirement Fund	13,297,348	2.60%
Leicester Worldwide Corporation	12,616,184	2.47%
Supervisory Committee of the Labor Retirement Fund-Labor Retirement Fund	9,077,000	1.78%
JPMorgan Chase Bank N.A. ,Taipei Branch in custody for Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	8,328,988	1.63%
Nan Shan Life Insurance Co., Ltd	7,935,000	1.55%
Enable Educational Technology Co., Ltd.	7,781,000	1.52%
Chunghwa Post Co., Ltd.	7,584,856	1.49%
Vanguard Emerging Markets Stock Index Fund, A Series Of Vanguard International Equity Index Funds	6,913,539	1.35%

V. Market price, net worth, earning, and dividends per common share and related information over the last two years

Item		Year: 2018	2019	March 31, 2020
Market price per share	Highest	151	251.5	273.5
	Lowest	101	136	162
	Average	123.94	207.43	224.44
Net worth per share	Before distribution	48.49	53.57	-
	After distribution(Note5)	48.49	-	-
Earnings per share	Weighted average shares	507,712 (thousand shares)	508,095 (thousand shares)	508,095 (thousand shares)
	Earnings per share	8.57	13.36	-
Dividends per share (Note4)	Cash dividends	6	9	-
	Stock dividends -	-	-	-
	Stock dividends -	-	-	-
	Accumulated unappropriated dividends	-	-	-
Return on investment	Price/earnings ratio (Note1)	14.46	15.53	-
	Price/dividend ratio (Note2)	20.66	23.05	-
	Cash dividends yield (Note3)	4.84%	4.34%	-

Note 1: Price/Earnings Ratio = Average Market Price / Earnings Per Share
Note 2: Price/Dividend Ratio = Average Market Price / Cash Dividends Per Share
Note 3: Cash Dividend Yield = Cash Dividends / Average Market Price Per Share
Note 4: Cash dividends filled in 2019 and 2018 represent the distribution of 2018 and 2017 retained earnings, respectively and exclude cash dividends from capital surplus.

VI. Dividend Policy and Status of Execution

1. Dividend Policy under the Articles of Incorporation

The Company belongs to the integrated circuit design industry and is in the growth phase of the enterprise life cycle. After considering the long-term business development of the Company, matching future investment fund requirements, and the long-term financial planning of the Company, if there are profits at the end of fiscal year, the Company shall first offset the accumulated losses with profits after tax, and then shall contribute 10% of profit as legal reserve, unless the accumulated legal reserve has reached the amount of the Company's total capital, and contribute or reverse special reserve in accordance with relevant laws or regulation by the competent authority. If there are net profits remained, the remaining net profits and the retained earnings from previous years shall be distributed as shareholders' dividend after the distribution proposal is prepared by the board of directors. In case the distribution is in the form of issuing new shares, the distribution proposal shall be approved at a shareholders meeting. In case the distribution is in the form of cash, the distribution proposal is authorized to be approved by the board of directors. After considering financial, business and operational factors, the Company may distribute the whole of distributable earnings of the current year, and may also distribute whole or part of the reserves in accordance with the law or the regulation by the competent authority.

When distributing dividends, the main consideration is the Company's future expansion of operating scale and requirement of cash flow. The cash dividends shall not be less than 10% of the total dividends distributed to shareholders in the current year.

According to Article 240, Paragraph 5, and Article 241, Paragraph 2 of the Company Act, the Company authorizes the distributable dividends, legal reserve, and capital reserve in whole or in part may be paid in cash after a resolution has been adopted by a majority vote at a meeting of the board of directors attended by two-thirds of the total number of directors, and in addition thereto a report of such distribution shall be submitted to the shareholders meeting.

2. 2020 Annual Shareholders' Meeting report on the distribution of dividends for 2019:

The Company's dividend distribution from retained earnings for 2019, approved by the board of directors, was NTD 9 per share in cash.

VII. Impact to business performance and EPS resulting from stock dividend distribution: None.

VIII. Employees' Compensation and Remuneration to Directors

1. Employees Compensation and Remuneration to Directors as Stated in the Articles of Incorporation:

If gained profits within a fiscal year, the Company shall allocate at a maximum of 3% of the profits as directors' remuneration, and allocate no less than 1% of the profits as employees' compensation. However, in case of the accumulated losses, certain profits shall first be reserved to cover the accumulated losses, and then allocate employees' compensation and directors' remuneration according to the proportion in the preceding paragraph.

The distribution of employees' compensation in the preceding paragraph shall be in cash or in stock, and shall be resolved with a consent of a majority of the directors present at a meeting attended by over two-thirds of the total directors. The distribution of director's remuneration and employee' compensation shall be reported to the shareholders meeting.

The employees entitled to receive employees' compensation may include the employees of subsidiaries of the Company meeting certain specific requirements. The requirements are determined by the board of directors or its authorized person.

2. Accounting for Employee Compensation and Remuneration to Directors

   The Company accrued employees' compensation and remuneration to directors based on a percentage of profit as stated in the Articles of Incorporation Article. If the accrued amounts differ from the actual amounts approved by stockholders' meeting, the Company will recognize the change as an adjustment to income of next year.

3. Employee compensation and Remuneration to Directors resolved by the Board of Directors

   3.1. The Proposal of 2019 Employees' Compensation and Remuneration to Directors resolved at the Board of Directors held on March 20, 2020:

Unit: New Taiwan Dollars; shares

Employees' Compensation				Remuneration to Directors	Difference	
Cash compensation	Stock compensation	Common Shares	total	cash	Difference Amount	Effect of financial statements
1,677,939,109	419,484,582	2,589,411	2,097,423,691	119,828,246	none	No applicable

Note: the 2019 Employees' compensation and directors' remuneration resolved at the Board of Directors are the same as the accrued amounts in 2019.

   3.2. The ratio of employees' stock compensation divided by the total of income after tax and employees' compensation:

Item	Amount	The ratio of employees' stock compensation divided by the total of income after tax	The ratio of employees' stock compensation divided by the total of employees' compensation
Employees' stock compensation	419,484,582	6.18%	20.00%

4. The 2018 Employees' Compensation and Remuneration to Directors approved by the stockholders' meeting (including common shares to employees, amount of employees' stock compensation and share price) and the effect in financial statements if the actual amounts approved by stockholders' meeting differ the accrued amounts

Unit: New Taiwan Dollars; shares

Employees' Compensation				Remuneration to Directors	Difference	
Cash compensation	Stock compensation	Common Shares	total	cash	Difference Amount	Effect of financial statements
1,151,674,037	0	0	1,151,674,037	76,778,269	none	No applicable

Note: The 2018 Employees' compensation and directors' remuneration approved by the shareholders' meeting are the same as accrued amounts in 2018.

IX. Status of Treasury Stocks: None

X. Status of Corporate Bonds: None

XI. Status of Preferred Stocks: None

XII. Status of GDR

March 31, 2020

Item \ Issuing Date			Jan 24, 2002
Issuing Date			Jan 24, 2002
Issuance & Listing			Luxembourg Stock Exchange.
Total Amount（US$）			240,180,375
Offering Price per Unit（US$）			17.25
Issued Units			13,923,500 units
Underlying Securities			New shares issued for capital increase of cash and issued common shares held by shareholders of the Company
Common Shares Represented			55,694,400 Common Shares
Rights and Obligations of GDR holders			According to the relevant instructions of the published manual
Trustee			N/A
Depositary Bank			Bank of New York Mellon
Custodian Bank			Mega International Commercial Bank
GDRs Outstanding			331,779 units
Apportionment of the expenses for the issuance and maintenance			In accordance with the contract of the underwriting syndicate and depositary bank
Terms and Conditions in the Deposit Agreement and Custody Agreement			The company will provide necessary public information in accordance with the contract for the depositary bank to notify the depositary certificate holder
Closing price per GDRs（US$）	2019	Highest	32.53
		Lowest	17.59
		Average	16.03
	As of March 31 of 2020	Highest	36.28
		Lowest	21.49
		Average	29.77

XIII. Status of Employee Stock Warrants: None

XIV. Status of Employee Restricted Stocks: None

XV. Status of Mergers or Acquisitions, or as assignee of new shares issued by other companies: None

XVI. Status of Implementation of Fund Utilization Plan: Not Applicable

Operations Overview

I. Business Overview

1. Business Scope

(1) Realtek's Main Business Areas

i. Research, development, production, manufacturing, and the sale of various types of integrated circuits

ii. Software and hardware application design, testing, repairs, and technical consultations for various types of integrated circuits

iii. Research, development, and the sale of various types of silicon intellectual property

iv. Adjunct trade and sales that relate to Realtek's core businesses

(2) Percentage of Operating Revenue

Unit: NT$1,000

2019	IC Products	Other	Total
Net Operating Revenue	60,623,210	120,796	60,744,006
Percentage of Operating Revenue	99.80%	0.20%	100%

(3) Current Products

Communications Network Products:

- PCIe Single-chip 2.5GBASE-T Controller for Gaming application
- 2.5GBASE-T Phyceiver
- USB 3.2 Gen 2 to PCIe 3.0x2 Single-chip Bridging Controller for Storage application
- Long Distance 10/100 BASE-T/100BASE-T1 Ethernet Phyceiver
- PCIe Single chip 1GBase-X Fiber Ethernet Controller
- USB3.2 Gen 1 Single-chip 1GBASE-T Ethernet Controller for Gaming Application
- Programmable PCIe Single-chip 1GBASE-T Ethernet Controller
- PCIe Single-chip 1GBASE-T Ethernet Controller for Gaming Application
- 100BASE-T1 Automotive Ethernet Phyceiver
- 100/1000BASE-T1 Dual Mode Automotive Ethernet Phyceiver
- 100BASE-T1 Automotive Multiport Ethernet Switch Controller
- 100/1000BASE-T1 Automotive Multiport Ethernet Switch Controller
- Single-chip UHD HDR Streaming Multimedia SoC
- Single chip Multi-CAS UHD Multimedia STB SoC
- 802.11b/g/n 1T1R WLAN Single-chip Controller with PCIe/USB2.0/SDIO2.0 Interfaces
- 802.11b/g/n 2T2R WLAN Single-chip Controller with PCIe/USB2.0/SDIO3.0 Interfaces
- 802.11b/g/n 1T1R WLAN and Bluetooth Smart Ready Single-chip Controller with

PCIe/USB2.0/SDIO2.0 Interfaces)

- 802.11a/b/g/n/ac 1T1R WLAN and Bluetooth Smart Ready Single-chip Controller with PCIe/USB2.0/SDIO3.0 Interfaces
- 802.11a/b/g/n/ac 2T2R WLAN and Bluetooth 5 Single-chip Controller with PCIe/USB2.0/SDIO3.0 Interfaces
- 802.11a/b/g/n/ac 2T2R WLAN and Bluetooth 5 Single-chip Controller with PCIe/USB2.0/SDIO3.0 and HS-UART Interfaces
- 802.11a/b/g/n/ac 2T2R WLAN Single-chip Controller with USB2.0 Interfaces
- 802.11a/b/g/n/ac 3T4R WLAN Single-chip Controller with PCIe/USB3.0 Interfaces
- 802.11a/b/g/n/ac 4T4R WLAN Single-chip Controller with PCIe/USB3.0 Interfaces
- Wireless LAN (Wi-Fi) with Microcontroller Integrated SoC
- Wireless LAN (Wi-Fi), Bluetooth and Microcontroller Integrated Multifunction SoC
- Low-power, Highly-integrated Dual Band Wi-Fi Network Camera SoC
- Wireless LAN 802.11ac Dual Band Access Point / Router Integrated SoC
- Bluetooth 5 BLE SoC
- Bluetooth 5 Audio SoC
- GNSS Satellite Positioning IC
- Octal Port Fast Ethernet Transceiver
- 5/8/16/24 Port Fast Ethernet Switch Controller
- Octal Port Gigabit Ethernet Transceiver
- 5/8-port Single Chip Gigabit Ethernet Switch Controller
- 16/24-port Gigabit Ethernet Switch Controller
- 24-port Gigabit + 2 Port 10G Ethernet Managed Switch Controller
- 48-port Gigabit + 4 Port 10G Ethernet Managed Switch Controller
- 24-port Gigabit + 4 Port 10G Ethernet Managed Switch Controller
- 48-port Gigabit + 6 Port 10G Ethernet Managed Switch Controller
- Integrated Single-Chip xPON Ethernet/xPON Network Router Processor
- Single Port Ethernet/xPON Network Bridge Processor
- 2 Port xPON Ethernet/xPON Network Router Processor
- GPON Laser Driver
- Octal Port Integrated IEEE 802.3at-Compliant PSE Controller
- Long Distance 10/100BASE-T/100BASE-T1 Ethernet Switch Controller
- VDSL 35B Router Controller

Computer Peripheral Products:

- HD-A 4-Channel Audio Codec
- HD-A 4-Channel Audio Codec with Embedded Class-D Amplifier and I2S In & Out
- HD-A 4-Channel Audio Codec with High Wattage Class-D Amplifier Supporting Speaker Protection
- HD-A Low Power Stereo Audio Codec

- HD-A Multi-Channel Audio Codec (7.1 and 10 Channels)
- SoundWire 4-Channel Audio Codec with Embedded Class-D Amplifier and I2S In & Out
- USB 2.0 Low Power Audio Codec with Hardware Equalizer
- Mobile Device Audio CODEC with Power Amplifier
- USB 2.0 to I2S Bridge Controller
- Hi-Fi Audio CODEC with Programmable Voice/Audio DSP for Mobile Device
- High Definition, High Efficiency Class-D Amplifier with Built-in Adaptive Boost, Equalizer and Speaker Protection for Handheld or Mobile Device
- High Definition, High Efficiency Class-D Amplifier with Multiband Equalizer and Dynamic Range Control for TV, Soundbar, and Sound System
- Embedded USB 2.0 & USB 3.0 High Definition Image Signal Processor Chip
- Embedded USB2.0 Image Signal Processor Chip Supporting Windows Hello Face Recognition
- Embedded SPI to USB1.1/2.0/ Fingerprint Hardware Encryption Bridge Controller
- USB 3.0 /USB 3.1 Gen 2 4-Port Hub Controller
- Highly Integrated USB Type-C Controller
- Highly Integrated IP Camera SoC
- Low Power AI IP Camera SoC

Multimedia Products:

- Integrated LCD Controller with VGA Analog Interface
- Integrated LCD Controller with DVI Interface
- Integrated LCD Controller with HDMI Interface
- Integrated LCD Controller with DisplayPort Interface
- DisplayPort to LVDS Video Translator
- DisplayPort to VGA Video Translator
- DisplayPort to HDMI2.0 Video Translator
- DisplayPort to HDMI2.1 Video Translator
- USB Type-C to VGA Video Translator
- USB Type-C to HDMI2.0 Video Translator
- DisplayPort MST Hub Controller
- Integrated High Resolution 5K3K/4K2K/QHD LCD Controller with HDR, DP1.4, HDMI2.0, and HDCP2.2
- Integrated High Resolution 4K2K144Hz/QHD165Hz Gaming LCD Display Controller with Realtek Owl Sight Technology, DSC, HDR, DP1.4, HDMI2.0, and HDCP2.3
- Integrated High Resolution QHD/FHD LCD Display Controller with USB Type-C Interface
- High-end Integrated LCD TV Controller Chip
- High-end Multimedia Digital/Analog LCD TV Controller Chip
- High-end 3D Smart LCD TV Controller Chip
- High-end Connected Digital/Analog LCD TV Controller Chip

- High-end UHD Smart Connected Digital/Analog LCD TV Controller Chip
- High-end UHD HDR Smart Connected Digital/Analog LCD TV Controller Chip
- High-end UHD HDR 60Hz/120Hz FRC Full-Function HDR Smart Connected LCD TV Controller Chip
- High-end UHD Full-Function HDR and 3D Surround Sound Multi-Core Smart Connected LCD TV Controller Chip
- High-end 8K LCD TV Video Decoder and Processing Chip

(4) Products Under Development

Communications Network Products:

- New Generation USB3.2 Gen 1 Single-chip 2.5GBASE-T Controller for Gaming Application
- USB3.2 Gen 2 Single-chip 2.5G/5GBASE-T Controller
- PCIe Single-chip 2.5G/5GBASE-T Controller
- 2.5G/5GBASE-T Phyceiver
- USB3.2 Gen2 x2 to USB PCIe 3.0 x 4 Single-chip Bridge Controller for Storage Application
- 1GBASE-T Ethernet Phyceiver for LED Transceiver Application
- 10BASE-T1, 100/1000BASE-T1 Automotive Ethernet Switch Controller
- Multi-port 100/1000/2.5GBASE-T Ethernet Transceiver
- New Generation Single-port 2.5G/5G/10GBASE-T Ethernet Transceiver
- New Generation Quad-port 2.5G/5G/10GBASE-T Ethernet Transceiver
- Octal-port IEEE 802.3at PSE Controller
- Quad-port IEEE 802.3at PSE Controller
- New Generation High-port Density Gigabit Ethernet Managed Switch Controller
- New Generation 24-port 10G + 4-port 25G + 2-port 100G Ethernet Managed Switch Controller
- New Generation Single-chip 10G xPON Home Gateway SoC
- 10G PON Laser Driver
- VDSL 35B Transceiver
- 802.11b/g/n/ac 1T1R WLAN and Bluetooth 5 Single-chip Controller
- 802.11a/b/g/n/ac 1T1R WLAN and Bluetooth 5 Single-chip Controller
- 802.11a/b/g/n/ac/ax 2T2R WLAN and Bluetooth 5 Single-chip Controller
- 802.11a/b/g/n/ac/ax 4T4R WLAN Single-chip Controller with PCIe/ USB3.0 interfaces
- Next Generation of Wireless LAN (Wi-Fi), Bluetooth and Highly-integrated Microcontroller SoC
- Wireless LAN 802.11ax Dual Band Access Point / Router Integrated SoC
- Bluetooth 5 ANC Audio SoC
- New Generation Ultra Low Power Audio SoC
- New Generation BT5.x BLE SoC

- Next Generation Single-chip UHD HDR Multimedia SoC
- Next Generation Single-chip UHD HDR Set-top Box SoC with Multi-CAS Support

Computer Peripheral Products:

- HD-A 4-Channel Audio Codec with High Wattage Class-D Amplifier Supporting Speaker Protection
- SoundWire Audio Codec
- Low Power USB2.0 Audio Codec
- USB2.0 Audio CODEC with DSP
- Voice Audio DSP
- Mobile Device Audio CODEC with Power Amplifier
- Customized Stereo High Fidelity Audio Power Amplifier for Gaming Device
- High Performance Programmable Voice/Audio DSP for Mobile Device
- High Definition Codec and Class-D Amplifier Single-chip with SoundWire Interface for Mobile Device
- High Definition, High Efficiency Class-D Smart Amplifier with Built-in Boost for Mobile Device
- New Generation Embedded USB2.0/MIPI Interface Supporting Video High Dynamic Range (HDR) Camera Image Signal Processor
- Card Reader Controller with PCIe Gen I Interface, Supporting SD 7.0
- USB3.2 4-Port Hub Controller
- Highly Integrated USB Type-C Controller
- New Generation Highly Integrated 4K+HDR IP Camera SoC

Multimedia Products:

- New Generation Integrated High-resolution UHD/QHD LCD Controller with USB Type-C Interface
- Integrated High-resolution 4K2K144Hz/QHD165Hz Gaming LCD Controller with HDMI2.1
- New Generation High-end UHD Full-Function HDR and 3D Surround Sound Multi-Core Smart Connected LCD TV Controller Chip
- New Generation High-end 8K TV Decoder
- New Generation High-end 8K Android AI Smart LCD TV Controller Single-chip

2. Industry Overview

(1) Industry Status & Trends and Product Development & Competition

According to the market research firm IC Insights, the global semiconductor industry's sales were US$442.3 billion in 2019, a decline of 12.3% compared to 2018. The main reason for the decline was a demand-supply imbalance of memory products that led to a 33% drop in output value. Excluding memory, the output value of the remaining IC products decreased by 2.5%. If counting only fabless IC design companies, sales fell by 2.7% year-over-year in 2019. Realtek's

2019 revenue in US dollars was nearly 2 billion, delivering a growth of 30.8% compared to 2018. It was the highest growth rate among the world's top 50 semiconductor companies.

Communications Network Products:

In Ethernet, the market has seen a new generation of gaming PCs, motherboards, network adapter cards, and dongles adopting Realtek's first generation 2.5Gbps Ethernet (2.5GbE) products. As each country upgrades its network infrastructure, the demand for 2.5GbE chips is rising. In addition, the telecom market is integrating 2.5GbE products into the planning of 5G Customer-Premises Equipment (CPE). In 2019, Realtek released its second-generation 2.5GbE single chip. With lowest power and smallest package among its peers, the chip was successfully designed into PC 2.5GbE products and other above-mentioned applications in the second half of 2019. In the communications network market, the demand for Low Power Ethernet Phyceivers for IP CAM/PON continued to reach record highs. New applications, such as LED public display, also contributed to revenues in the second half of 2019. Furthermore, falling Solid-State Drive (SSD) prices encouraged more people to replace their traditional hard drives with SSDs. In time for this transition, Realtek developed a USB 3.2 Gen 2 to PCIe 3.0 x 2 Bridge for external PCIe or SATA SSD storage. A number of customers adopted this technology following its release in 2019.

In the Ethernet Switch market, Realtek has been the market share leader in embedded applications and Unmanaged Switches, while its market share in Smart Switches was steadily rising. In 2019, Realtek continued to develop higher-end, faster layer 3 Managed Switches and faster 10G, 40G, and 100G Switches. It is also developing 2.5G, 5G, and 10G PHY products to expand the product depth and breadth. Following years of advances, Realtek has smoothly transitioned into seeing embedded applications and Smart Switches as its main growth drivers. As demand in the Power-over-Ethernet (PoE) Switch market quickly rises and customers call for a total solution, Realtek has committed itself to PoE R&D, with a focus on the pairing of switches with Power Source Equipment (PSE) and security applications.

China is the world's largest market for optical fiber, while growth prospects in other regions are firmly in sight. Over the past two years Realtek has endeavored, with success, to build a strong market share in China while expanding in other areas. The most sought-after new market specifications are xGPON products with greater bandwidth. For example, towards the end of 2019 Chinese telecom operators began to prepare tenders and conduct field tests for 10G PON Home Gateway Units (HGU). Cortina Access, a Realtek affiliate, is in an excellent position to fulfill these market needs.

Increasing numbers of car makers in Europe, the United States, China, Japan, South Korea, and other areas are turning to Automotive Ethernet for in-vehicle networking. Many use Automotive Ethernet to connect in-vehicle safety sensors, 360-degree camera systems, infotainment head units, and instrument panels. Realtek's Automotive Ethernet products were already named as a 'Golden Sample' by IOP Certification Laboratory for Interoperability Testing; they were the first in the world to pass the OPEN Alliance TC10 Deep Sleep & Wake

Up protocol. At a power consumption of a mere 35µA, they support remote Electronic Control Unit (ECU) wake-up, making them an imperative part of energy-efficient automobiles. They have been certified by many car makers, adopted by tier one suppliers, and are starting shipment. Looking ahead, Realtek is using its superior technical advantages to pioneer second-generation Automotive Ethernet products, including a Dual Mode Multiport 100/1000BASE-T1 Switch and Dual Mode PHY that supports 100/1000BASE-T1. European and American automobile manufacturers and their tier one suppliers are gradually adopting this technology for their 2022/2023 automotive network backbone needs. In addition, the 10BASE-T1 technology specifications jointly promoted with the automotive manufacturers in the OPEN Alliance are planned to be deployed into the next generation of Multiport Switches in order to meet 2024/2025 market needs.

After many years of streaming media such as Netflix, YouTube, and Amazon popularizing the use of Over the Top (OTT) boxes, other content providers such as Disney, Apple, and HBO have joined the market, further boosting demand and transforming the pay television industry. In addition to operators continuing to deliver high-quality audio and video content using broadcast, IP, or hybrid network services, they have also fully tuned to IP to launch OTT boxes. Google is pushing its Android TV platform as a way of steering the closed telecom market towards an open IP ecosystem that enables major telecom operators to offer hybrid OTT and IPTV boxes that play online video. With consumers' changing viewing habits and demanding higher quality content, the operators are facing greater challenges in system security. In this quickly maturing market, with products trending towards high performance at low prices, Realtek is responding with a new generation of UHD Multimedia Controllers that meet each operator's Multi-CAS security requirements. As well as integrating the new generation of HDR technologies, they support the latest audio-video codecs, such as AV1, AVS2, and VVC. Software and hardware reference designs that are cost competitive and offer low power consumption further help customers to develop high efficiency OTT boxes to take advantage of this key market. Realtek Multimedia Controllers that combine in-house multimedia and network total solutions have an advantage that is difficult to emulate.

For Wi-Fi controllers, PC OEM customers significantly decreased usage of 11n Wi-Fi in 2019. Other than in certain niche markets, 11ac Wi-Fi has already become the standard for PCs. Realtek observed the same trend in its 11ac shipments in PC markets in 2019 for both 11ac 1T1R and 2T2R products. At the same time, the new generation of 11ax standard Wi-Fi products was released into the market in 2019. PC customers started to use them in high-end markets. Realtek are joining the competition in this new Wi-Fi market in earnest as it starts mass production of its first generation of 11ax products in 2020.

In addition to the traditional PC market, Realtek's Wi-Fi solutions are being integrated into other products. Major international printer manufacturers started to use Realtek Wi-Fi solutions in 2018. Expanded deliveries in 2019 have increased overall 2019 revenues. Along with Wi-Fi, other wireless transmission methods gaining popularity include Bluetooth printing and Neighborhood Aware Networking (NAN or Wi-Fi Aware). These added options give end users

greater convenience and capabilities. Although the tablet computer market has contracted since 2017, more than 150 million tablet computers continue to be produced each year. Realtek will take advantage of this market by continuing to offer high value Wi-Fi solutions to customers.

As technology matures and prices become more affordable, Wi-Fi use is flourishing in the consumer and IoT markets. For example, Wi-Fi has already become a standard feature in smart televisions. Realtek performs strongly in major global television markets. As the television market becomes saturated, Wi-Fi use is trending toward an M-shape, with high-end products using 11ac and gradually adopting 11ax while low-end products continue to use 11n. For all ranges of televisions, Realtek offers Wi-Fi solutions with high price-performance ratios that support expansion of this important market.

China is home to more than 100 million IP STB users. Support from the three leading telecom operators over the past five years has brought Wi-Fi capabilities to a high percentage of these devices. Broadcasting systems also continue to use Wi-Fi while introducing 4KP60 models that boost growth of Wi-Fi 11ac+BT and gradually creates demand for 11ax. Realtek's Wi-Fi products have been used in IP STB products for many years. In 2020, Realtek will continue to offer high-quality Wi-Fi products that are suitable for IP STB.

Realtek's Wi-Fi application in IP CAM has achieved good results in 2019. With the rise of AI technologies, human shape recognition, facial recognition, and gesture recognition are now possible using remote server or edge computing, thereby fueling a stable IP CAM growth. However, due to congestion in the 2.4GHz band, caused by interference from various ISM (industrial, scientific and medical) band transmission technologies, as well as channel competition and the overlap of AP network coverage, the quality of services of 2.4GHz WLAN will continue to drop, thereby inhibiting the practicality of IP CAM. Fortunately, as WLAN technology improves, the performance of the built-in RF front-end (PA and LNA) of 5GHz WLAN has been improved, which enlarges the coverage of WLAN in the 5GHz band and reduces the cost of dual-band WLAN. New technologies added to 802.11ax, including a longer OFDM symbol, guard interval, spatial reuse, and OFDMA are conducive to improve the transmission experience and will become mainstream in WLAN IP CAM applications. Realtek's Wi-Fi technology adheres to international standards and undergoes frequent upgrades; it is well positioned to be the best Wi-Fi solution for IP CAM.

Google, Apple, Amazon and other western-based companies are leaders in the smart speaker market. Chinese Internet companies such as Alibaba, Xiaomi, and Baidu entered the competition and split the market share in entry-level smart speakers with 11n+BT Combo specs. Realtek's Wi-Fi rode the wave and took the lead by pairing with China's smart speaker SoC makers. In 2020, Realtek will actively expand the high-end smart speaker 11ac market in Europe and America.

In 2019, as 11ac continued to replace 11n for Integrated WLAN Access Point/Router products, an increasing number of global brands and network operators chose to adopt Realtek's highly

integrated, high-performance 802.11ac Dual Band Router solutions, resulting in continuing shipment growth. Realtek's Dual Band Mesh Routers took advantage of an exceptional price-performance ratio to spark new market demand and product growth. In high-end markets, Realtek released highly integrated 4-antenna 11ac Dual Band products to seize the market. In 2020, it will release a new generation of 11ax routers that will provide an improved, comprehensive router solution.

The Internet of Things (IoT) market grew more visible, and customer acceptance broadened, as applications such as Big Data, AI, and smart speakers became commonplace. In 2019, Realtek's IoT customers and shipment grew quickly. Gartner forecasts that IoT growth will remain in double digits in 2020. The statistics portal Statista predicts that by 2025, there will be 75 billion devices with IoT functionality. Realtek will continue to invest in IoT development. Realtek already has a comprehensive suite of IoT products in mass production, including single-chip controllers for IoT household appliances, single-chip with microprocessors for diverse product applications, and single-chip with microprocessors that are suitable for sound, audio, and video applications. These are multifunctional, highly integrated, low energy, and high security. Every year Realtek pours more resources into developing new generations of energy-saving IoT chips in response to the change of IoT product needs, trending from mobile app control to adding AI applications, combined with voice and image recognition, to fulfill customers' pricing and specification needs. Realtek directly cooperates with the organizations and companies that are leading the IoT revolution, including the makers of Apple HomeKit, Google Home, and Amazon Alexa, as well as the Open Connectivity Foundation (OCF), and ARM Mbed to provide customers with complete software and hardware development tool kits. Realtek is the world leader in releasing the first Ultra Low Energy Wireless IoT Single Chip to feature image and voice functions; it introduces product innovations every year and frequently receives COMPUTEX Taipei Best Choice Award in the IoT category.

Bluetooth has been widely adopted in mobile phones, TVs, OTT boxes, smart speakers and other products, assisting individuals or home users to enjoy Bluetooth earphones, sports bracelets, Bluetooth voice-assisted remote controllers, and Bluetooth 5 mesh peripherals, bringing easy entertainment enjoyment, user-friendly man-machine interfaces, as well as simple and fast operational feedback.

Consumers have shown a strong affinity for Bluetooth products; True Wireless Stereo (TWS) earbuds in particular, the sales of which grew significantly in 2019, a trend that is expected to continue. For TVs and OTT boxes, Bluetooth voice-assist remote controllers are replacing standard IR remote controllers. Commercial applications of Bluetooth Mesh networks that support smart voice ecosystems are maturing, which is supporting growth of peripheral Bluetooth products. In the future, with the low power characteristics of Bluetooth and online cloud services taking shape, Realtek's Bluetooth will not only be used in personal entertainment and smart homes, but also enter industries such as smart factories, property management, and B2B transportation management, providing multiple levels of cross-domain applications.

Realtek has close to 20 years of experience in Bluetooth R&D, covering a wide range of applications, including Transceiver Controllers, Bluetooth BLE SoC, and Bluetooth Audio SoC. Realtek's BLE series of products are especially popular among major international brands for voice-assist remote controllers, assisting the transition of remote controllers from infrared to Bluetooth; they also enable large color display upgrades for bracelets, thereby increasing the appeal and value of wearables. Further, Realtek's first generation Bluetooth audio solution rode on the popularity of TWS earbuds brought by the success of Apple's AirPods. In a short-time, Realtek became a primary solution provider.

In 2019, Realtek's first generation Bluetooth TWS solution was well received in the market and a favorite of many international brands for its low power, extended coverage, and high compatibility. In 2020, Realtek's next generation of TWS solutions add ANC capabilities to meet market expectation for new earphone functions. This new range of devices is expected to enable Realtek to maintain its position as the leader in Bluetooth audio, and to expand its market influence and empower market growth by working closely with supply chain and brand partners.

Computer Peripheral Products:

In 2019, Realtek continued to advance in the PC market by offering a High-Definition Audio Codec and a High-Definition, High-Efficiency, Class-D Smart Amplifier that turns PCs into a complete media center. It cooperated with electronic gaming manufacturers to finish new systems and peripheral products that provide an immersive sound experience for gamers. For voice assistants, Realtek released a third-generation microphone algorithm that is used in PC products as well as in the voice modules for headphones and teleconference systems, giving consumers a highly efficient, low power hardware and software solution. Meanwhile, as more mobile phones eliminate the 3.5 mm headphone jack, the market for USB Type-C to analog converter emerges. To take advantage of this opportunity, Realtek released USB chips that have already become the audio solution of choice for several gaming and commercial headphone manufacturers.

In the consumer electronics audio chip market, Realtek uses exclusive low power design technology and energy-saving hardware and software solutions to extend battery life. It developed an efficient Audio Codec with Class-D Amplifier, Built-in Adaptive Boost, Equalizer, and Speaker Protection. This highly integrated device helps customers reduce external components, thus reducing the motherboard area. In the smartphone and game console sectors, Realtek's Low Power Audio Codec, Smart Amplifier, and Programmable Audio DSP have been gradually adopted by major brand manufacturers and received accolades.

With respect to Card Readers, Realtek released integrated card readers with PCI Express and USB 3.0 interfaces in response to the need of notebook and desktop PCs, integrating memory card readers and smart card readers. Realtek is the first in the market to release devices that support the latest SD7.0 memory cards and Intel's newest energy-saving specifications. Besides keeping market share leadership, Realtek strives to create new product applications and value

for customers.

To meet the increasing popularity of products supporting USB 3.0, and the rapid growth in their demand, Realtek's 4-Port USB 3.0 hubs have been adopted by many system manufacturers, leading to increasingly larger monthly shipments. Realtek further leads the industry in releasing USB 3.1 GEN 2 hubs, many of which have been chosen by manufacturers on new platforms. Besides fast transmission and low power consumption, they integrate USB Type-C functions to provide customers with the option of designing higher-spec and more refined product design flexibility. In the future, Realtek will integrate existing technologies and products to launch newer multi-functional hubs to expand the market and create more diversified product designs for customers.

With the introduction of USB Type-C, Realtek simultaneously introduced a series of Type-C controllers that were the first highly integrated products in the market. They can not only reduce overall design costs, but also make the product more refined, Many manufacturers have already deployed them in a wide range of applications. Realtek will continue to develop products with enhanced specifications to provide customers with a wider range of product designs.

For Embedded Camera Controllers with a USB interface, due to the increasing demand for users to replace traditional password input with Biometrics, and the Windows 10 operating system's incorporation of Windows Hello Face Authentication since 2015, the front-facing camera must support near-infrared and record image quality that meets the ever-evolving standards of Microsoft's facial recognition algorithms. Over the past five years, Realtek has continued to lead the industry in performance, gaining Microsoft certification and full adoption by PC OEM customers, achieving an extremely high market share. Besides developing PC facial recognition technology, Realtek is entering the field of fingerprint recognition for the PC industry. It developed a Low Power SPI to USB Fingerprint Hardware Encryption Bridge Controller that has already been used by leading OEM customers.

In response to security and video surveillance industry needs, since 2016 Realtek has released a series of highly integrated IP Camera single chips. These contain highly flexible image signal processors and can support various CMOS sensors on the market, thus satisfying customers' broad range of video preferences. The integrated audio and network functions offer a network camera single chip solution with high cost-effectiveness. Currently Realtek has successfully penetrated many consumer and smart home IP camera brand makers, making it one of the well-known suppliers of IP Camera single chips. In 2020, Realtek will release a low power AI Camera single chip with highly integrated edge computing capabilities, H.264/H.265 Codec, and support for CMOS sensors that are up to 5 megapixels, thereby expanding Realtek's security and video camera single chip portfolio, and continually providing customers with more competitive solutions.

Multimedia Products:
The market for LCD monitors remains steady. New opportunities are concentrated on devices

offering high resolution, high refresh rates, superb video color, and the latest external display interfaces. Professional displays with ultra-high resolution and image quality, such as WFHD, QHD, WQHD, and UHD, high-quality displays that support HDR or WCG, and specialized displays that use high refresh rates to improve the gaming experience are focal points of this competitive market. Realtek continues to offer related solutions, and the response from customers has been highly positive. For notebook and desktop applications, Realtek offers a DisplayPort to VGA Video Translator and a DisplayPort to HDMI Video Translator that have been widely adopted by tier-one and tier-two brands. Many devices such as notebook computers, mobile phones, and the Apple iPad Pro now use USB Type-C for transferring video, data, and power. This raises demand for Type-C peripheral products. Realtek led the release of Integrated LCD Monitor Controllers with the USB Type-C Interface, and various video interface translators such as USB Type-C to VGA and USB Type-C to HDMI, as well as highly integrated DisplayPort video hub ICs. Customers have responded positively.

Fierce competition among suppliers of LCD TV Controllers in recent years has led key suppliers to gradually downsize, merge, or leave the market. Realtek, however, continues to develop new products, including Smart Connected LCD TV Controller Chips that support UHD (resolution of 3,840 x 2,160), LCD TV Controller Chips that support UHD 60 Hz/120 Hz Frame Rate Conversion, as well as a new generation of Integrated 4K Smart LCD TV Controllers that support HDR. With 8K broadcasts rolling out in 2020, Realtek provides an 8K TV decoder solution for customers to have a seamless transition to 8K TV without changing the original TV architecture, and more competitive products for LCD television manufacturers.

(2) Industrial Upstream, Midstream and Downstream Relationships

The IC manufacturing industry can be divided into upstream IC design and design services companies, midstream IC chip manufacturers, and downstream IC packaging and testing suppliers. IC design firms typically engage in design and sale of their own products or commissioned designs for other firms. Within the supply chain, they are knowledge intensive. Before the final product is completed, however, photo mask tooling, wafer fabrication, and product packaging and testing are needed. Generally, design firms contract external manufacturers to support these production and manufacturing processes.

3. R&D Development

(1) R&D Expenditures in the Past Two Years

Unit: NT$1,000

Year	Revenues	R&D Expenditure	Ratio (%)
2018	45,805,746	12,969,972	28.32
2019	60,744,006	15,535,505	25.58

(2) Products Successfully Developing In the Past Year

Communications Network Products:

- PCIe Single-chip 2.5GBASE-T Controller for Gaming Application
- 2.5GBASE-T Phyceiver
- USB 3.2 Gen 2 to PCIe 3.0x2 Single-chip Bridge Controller for Storage Application
- Long Distance 10/100 BASE-T/100BASE-T1 Ethernet Phyceiver
- PCIe Single-chip 1GBase-X Fiber Ethernet Single-chip Controller
- USB3.2 Gen 1 Single-chip 1GBASE-T Ethernet Controller for Gaming Application
- Programmable PCIe Single-chip 1GBASE-T Ethernet Controller
- PCIe Single-chip 1GBASE-T Ethernet Controller for Gaming Application
- 100BASE-T1 Automotive Ethernet PHY
- 100/1000BASE-T1 Dual-mode Automotive Ethernet PHY
- 100BASE-T1 Automotive Ethernet Switch Controller
- 100/1000BASE-T1 Automotive Ethernet Switch Controller
- Single-chip UHD STB SoC
- 802.11b/g/n 2T2R WLAN Single-chip Controller with PCIe/USB2.0/SDIO3.0 Interfaces
- 802.11a/b/g/n/ac 2T2R WLAN and Bluetooth 5 Single-chip Controller with PCIe/USB2.0/SDIO3.0 and HS-UART Interfaces
- 802.11a/b/g/n/ac 2T2R WLAN Single-chip Controller with USB2.0 Interface
- 802.11a/b/g/n/ac 4T4R WLAN Single-chip Controller with PCIe/ USB 3.0 Interfaces
- Wireless LAN 802.11ax Dual Band Access Point / Router Integrated SoC
- Bluetooth 5 Dual Mode Transceiver Controller IC
- Bluetooth 5 BLE SoC
- Bluetooth 5 Audio SoC
- GNSS Satellite Positioning IC
- Octal Port Gigabit Ethernet Transceiver
- 24-port Gigabit + 4-port 10G Ethernet Managed Switch Controller
- 48-port Gigabit + 6-port 10G Ethernet Managed Switch Controller
- Integrated Single-chip xPON Network Gateway Processor
- Integrated Single-chip 10G xPON Network Gateway Processor
- GPON Laser Driver
- Octal-port Integrated IEEE 802.3at-Compliant PSE Controller
- QUAD Port Integrated IEEE 802.3bt-Compliant PSE Controller
- Long Distance 10/100 BASE-T/100BASE-T1 Ethernet Switch Controller
- VDSL 35B Router Controller

Computer Peripheral Products:

- HD-A 4-Channel Audio Codec with High Wattage Class-D Amplifier Supporting Speaker Protection
- USB 2.0 Low Power Audio Codec with Hardware Equalizer
- Mini DSP (Digital Signal Processor) for Voice Input Processing

- SdW Audio Codec
- Mobile Device Single-chip Audio Codec with Power Amplifier
- Mobile Device Audio Codec with DSP
- Low Power USB 2.0 Audio Codec
- High Definition, High Efficiency Class-D Audio Amplifier with Equalizer and Speaker Protection for Handheld or Mobile Device
- High Definition, High Efficiency Class-D Audio Amplifier with Multiband Equalizer and Dynamic Range Control for TV, Soundbar, and Sound System
- SoundWire Interface High Definition Class-D Audio Amplifier with Built-in Audio Digital Signal Processing and Multi-coil Speaker Driving Capability for Mobile Device and PC
- Card Reader Controller with USB 2.0 Interface, Supporting SD 3.0 for Notebook PC
- Card Reader Controller with USB 3.0 Interface, Supporting Intel NB Power Saving Specification
- Card Reader with PCIe Interface, Supporting SD7.0
- 4-Port USB 3.0 Hub Controller
- 4-Port USB 3.1 Gen 2 Hub Controller
- Type-C Controller
- Embedded USB2.0 & USB3.0 High Definition Image Signal Processor Chip
- Embedded USB2.0 and Windows Hello Face Authentication Enabling Image Signal Processor Chip
- Low Power Embedded SPI to USB1.1 Fingerprint Hardware Encryption Bridge Controller
- Low Power AI IP Camera SoC

Multimedia Products:

- Ultra-low Power, High Resolution 5K3K/4K2K LCD Controllers with HDR, DP1.4, HDMI2.0, and HDCP2.2
- High Resolution 4K2K144Hz/QHD165Hz Gaming LCD Controller with Realtek Owl Sight Technology, DSC, HDR, DP1.4, HDMI2.0, and HDCP2.3
- DisplayPort to LVDS Video Translator
- DisplayPort to HDMI2.1 Video Translator
- USB Type-C to HDMI 2.0/VGA Video Translator
- DisplayPort MST Hub Controller
- High-end Integrated LCD TV Controller Chip
- High-end Multimedia Digital/Analog LCD TV Controller Chip
- High-end 3D Smart LCD TV Controller Chip
- High-end Connected Digital/Analog LCD TV Controller Chip
- High-end UHD Smart Connected Digital/Analog LCD TV controller Chip
- High-end UHD HDR Smart Connected Digital/Analog LCD TV Controller Chip
- High-end UHD HDR 60Hz/120Hz FRC Smart Connected Digital/Analog LCD TV Controller Chip
- High-end UHD HDR 60Hz/120Hz FRC and New Generation 3D Surround Sound Smart Connected LCD TV controller Chip
- High-end 8K LCD TV Video Decoder and Processing Chip

4. Long-Term and Short-Term Business Development Plan

(1) Short-Term Business Development Plan

i. Continue to use the Company's innovation framework to lower chip capital costs, in order to ensure competitive prices and raise profit margins.
ii. Maintain existing market share while expanding the overall market by releasing new products and offering diverse sales combinations and distribution strategies.
iii. Take the needs of key customers into account when assisting them in the integration of product logistical support systems. Provide the best sales and marketing services to win customers' trust and meet customer's needs.
iv. Participate in international exhibitions and product evaluation conferences to raise the exposure of new products and demonstrate product quality.

(2) Long-Term Business Development Plan

i. Participate in formulating and promoting international standards to acquire related product and technical information in advance, thus accelerating Time-to-Market. Participating in the evaluation and selection of the test platforms for the standard organizations to make Realtek an industry benchmark in interoperability testing.
ii. For products with a high market share, stabilize the market share and quality of products while building a global service and technology network. For products with relatively low market share, actively develop new customers and expand new markets and sales channels to meet the goal of increasing overall market share.
iii. Regularly hold product release events and technical conferences in response to regional market needs. Directly speak with brand owners and discuss their future product needs, thus strengthening client relations.

II. Marketplace and Production Overview

1. Market Analysis

(1) Major Product Sales Regions

Unit: NT$1,000

Sales Region	2018		2019	
	Sales Amount	Percentage	Sales Amount	Percentage
Taiwan	23,741,926	51.83%	30,193,504	49.71%
Asia	21,762,224	47.51%	30,226,514	49.76%
Other	301,596	0.66%	323,988	0.53%
Total	45,805,746	100.00%	60,744,006	100.00%

(2) Market Share

Realtek is one of the world's leading IC suppliers. It designs and develops wired and wireless communications network as well as various computer peripheral IC products and multimedia applications. According to IC Insights, in 2019 Realtek ranked 12th worldwide in terms of revenue among IC design companies without fabrication plants.

(3) Future Market Supply and Demand and Growth Characteristics

Boosted by IoT and cloud services, many electronic goods, home electronics products, and transportation devices now have built-in Wi-Fi or Bluetooth. Examples include broadband devices like IPSTB, cable modems, and DSL, as well as consumer electronics products such as video game consoles, Blu-ray players, smart TVs, printers, refrigerators, air conditioners, voice-controlled smart speakers, cloud-based IP cameras, vacuum robots, drones, projectors, consumer and industrial robots, industrial controls, and even automotive. As more equipment is wirelessly connected, and as smart phones and cloud services become more widespread, the next wave of Wi-Fi and Bluetooth growth will come from hybrid applications involving IoT and AI. Furthermore, the increase in wireless connectivity speed will spur demand for heightened wired network connectivity speed. AP router, switch, PON, cable modem, NAS, gaming PC, commercial PC will all see gradual upgrades to 2.5Gbps Ethernet. In addition, the Internet of Vehicles, and trends such as autonomous and electric vehicles, are significantly raising data stream bandwidth while boosting demand for lighter, lower energy devices, thereby making Ethernet the backbone of in-vehicle networking.

The OTT and network operator set-top box market will continue to grow. At the same time, the market for UHD televisions is rising and UHD HDR video content is becoming widespread. Demand for high-end Wi-Fi, such as 802.11ac 2T2R, 4T4R, and 802.11ax is quickly increasing, and more people want integrated smart home products with voice controls. These changes are boosting demand for fast wireless connections and smart edge computing. Moreover, the network operator market is shifting towards a more open IP ecosystem that is

boosting demand for IP OTT chips. Realtek is therefore developing highly integrated multimedia controllers with new features and a high cost-performance ratio. Used in conjunction with network communication chips, the controllers will offer a total solution that helps customers take advantage of opportunities in this market.

The IP camera is an important element of the Internet of Things. It combines remote and mobile access, AI and AI edge computing operations such as facial recognition, gesture recognition, voice and voiceprint recognition, as well as a new generation of H.265 Codec, 360-degree panoramic and 3D video techniques that make product applications more diverse. Besides traditional security surveillance, emerging applications with strong potential include AI optical recognition, unmanned stores, and delivery and warehouse systems that are essential for industry 4.0.

The strong development of the gaming industry in recent years has breathed new life into the PC market. Gaming and high-end PCs maintain their growth where high-end audio experience and value perception have become the selling points. To this end, Realtek has developed a new generation of audio codec with high voltage (+9V) Class- D amplifiers and speaker protection. These integrate embedded adaptive boost circuits with low power designs to help customers reduce external components and cut the size of the motherboard via a reduced rBOM. To satisfy the high audio quality requirements of gaming PCs, e.g., to meet the Hi-Fi audio specs (32bits/384KHz sample rate), Realtek combines strengths in software and hardware integration to develop audio technology that provides the best balance between a slim PC and a Hi- Fi audio application. In addition, voice applications are becoming common on the new generation of platforms among global PC brands. It is expected that the demand for intelligent voice wake-up and voice input for PC products will continue to rise. Acting in concert with the certification and promotion of voice technology by Microsoft Cortana and Amazon, Realtek will continue to work on voice recognition and voice wake-up technology and will add deep learning to enable good interactive experiences in voice applications, thereby giving users a convenient and enjoyable voice controls in both their work and daily life. Realtek will be the best voice and audio integrated solution provider for the new generation computer products.

New specs and interface technologies, such as 4K2K, USB Type-C, HDMI 2.1, DP 1.4, HDR, WCG, and high-frame-rate gaming, are ushering in growth in the LCD monitor market. Lower overall costs are another key trend. In the 2020 NB/DT market, more video interface connectors are using digital interfaces. For example, there is increased demand for the DisplayPort to HDMI 2.0 interface controller and the high-end DisplayPort to HDMI 2.1 interface controller. As more notebooks and mobile phones adopt USB Type-C and Thunderbolt 3 interfaces, demand for external USB Type-C video hubs is expected to increase dramatically. Realtek’s Single-Chip USB Type-C video translator will also benefit from the strong demand in this market.

Sales of LCD televisions are expected to gradually increase in 2020. Key growth will come from Central and South America, North America, China, and Southeast Asia. UHD/HDR TVs

and Smart TVs will become mainstream products this year, and the market for 8K televisions will gradually grow as the availability of 8K broadcasts increases. For Google-led Android TV, on one hand, manufacturers using AOSP (Android Open Source Project) are prompted to switch to the development of end devices using regular versions of Android TV. On the other hand, a new development platform, Reference Plus, is launched to attract more OEMs. Over the long-term, growth in the global LCD television market will continue. Realtek will promote its products in key markets while providing customers with comprehensive solutions.

(4) Competitive Strengths

i. Advanced Core Technologies: Realtek has excellent complementary radio frequency (RF), analog and mixed signal circuit design capacity, IC manufacturing knowledge, systems technology, and intellectual property. These factors contribute to higher product effectiveness and production yield, thus lowering costs.

ii. Strong Customer Base: Realtek's customer base includes leading manufacturers of PCs, motherboards, network hardware, consumer electronics, and multimedia products. By offering high-value, high-capacity products with excellent economic benefits, Realtek endeavors to build long-term partnerships with customers.

iii. Excellent Cost-Benefit Returns and Customer-Oriented Products: Realtek is adept at developing products with high cost-benefit returns. By combining chip and system design, it provides customers with high-value system integration and helps them quickly release new products.

iv. Experienced R&D and Management Teams: Realtek's R&D and management teams have extensive experience in the semiconductor industry. An excellent workplace environment and strong corporate culture attract talented technical and management staff.

(5) Future Advantageous and Disadvantageous Factors

i. Advantageous Factors:

(a) Ahead of domestic peers in the release of many communications network, computer peripheral, and multimedia IC products. Competitive prices. Realtek will continue to develop advanced core technologies to help increase product yield and decrease production costs.

(b) Realtek maintains good relations with wafer foundries, which promotes a stable supply of raw materials and steady raw material costs.

(c) Active client support, including the best sales and marketing services. These factors support a strong customer base.

(d) Experienced R&D and management teams with decision-making authority combined with a corporate culture of mutual support attract talented technical staff.

ii. Disadvantageous Factors

Fierce competition in a short product life-cycle market. Failure to quickly release new products would lead to a loss of market share, thereby impacting profits.

iii. Countermeasures:

(a) Proactively invest in new product development to timely release new products and gain

market share.

(b) Proactively improve existing products. Reduce costs or increase product added value by yield improvement and performance enhancement.

(c) Offer comprehensive product services or jointly develop new products with customers to foster win-win situations.

2. Main Applications for Major Products and Production Process

(1) Main Applications

i. Communications Network Products: routers, switches, home gateways, OTT boxes, Wi-Fi applications, smart home appliances, game consoles, security cameras, etc.

ii. Computer Peripheral Products: Desktop computers, notebook computers, card readers, etc.

iii. Consumer Electronics Products: GPS, mobile electronic devices, mobile phones, tablet computers, etc.

iv. Multimedia Products: LCD monitors, multimedia video translators, smart HD TVs, etc.

(2) Production Process

Realtek primarily engages in product design; it commissions wafer foundries to do wafer manufacturing. Finished wafers are tested then sent to an assembly house for packaging. Packaged products then go through final testing.

3. Supply Status of Key Raw Materials

Wafers are Realtek's primary raw materials. Since Realtek always maintains good partnerships with wafer manufacturers, it expects a steady supply of wafers in 2020. Nevertheless, we still must pay careful attention to the impact on supply and demand caused by COVID-19 pandemic.

4. Suppliers' Name of purchase equal to or over 10% of the total purchase in any of the last two years

Major suppliers in the last two years

Unit: NT$ thousands

Item	2018				2019				2020 first Quarter			
	Name	Amount	% of Total Purchase	Relation to the Company	Name	Amount	% of Total Purchase	Relation to the Company	Name	Amount	% of Total Purchase	Relation to the Company
1	A	10,187,430	42		A	10,850,350	31		A	2,478,160	25	
2	B	1,996,534	8		B	6,574,369	19		B	2,175,100	22	
3	C	1,764,782	7		C	1,837,759	5		C	644,116	7	
4	D	3,929,930	16		D	5,681,987	16		D	1,907,514	20	
	Other	6,639,162	27		Other	9,963,457	29		Other	2,572,326	26	
	Total	24,517,838	100		Total	34,907,922	100		Total	9,777,216	100	

There have been few changes in the Company's major suppliers in the last two years.

Major customers in the last two years

Unit: NT$ thousands

	2018				2019				2020 first Quarter			
Item	Name	Amount	% of Total Operating revenue	Relation to the Company	Name	Amount	% of Total Operating revenue	Relation to the Company	Name	Amount	% of Total Operating revenue	Relation to the Company
1	A	10,575,725	23		B	13,368,262	22		B	3,086,483	19	
2	B	10,505,983	23		D	11,392,557	19	(note)	A	2,811,152	18	
3	D	8,373,071	18	(note)	A	10,014,670	16		D	2,683,749	17	(note)
	Other	16,350,967	36		Other	25,968,517	43		Other	7,346,648	46	
	Total Operating revenue	45,805,746	100		Total Operating revenue	60,744,006	100		Total Operating revenue	15,928,032	100	

There have been few changes in the Company's major customers in the last two years.

Note: The chairmen of both companies are second-degree relatives.

5. Production Volume and Value in the Past Two Years

Unit: NT$ thousands

Year / Quantity & Value / Major Product	2018			2019		
	Capacity	**Output**	**Value**	**Capacity**	**Output**	**Value**
IC (thousand pieces)	–	1,882,786	24,347,438	–	2,223,987	33,317,918
Total	–	1,882,786	24,347,438	–	2,223,987	33,317,918

6. Sales Volume and Value in the Past Two Years

Unit: NT$ thousands

Year / Quantity & Value / Major Product	2018				2019			
	Domestic		**Export**		**Domestic**		**Export**	
	Quantity	**Sales**	**Quantity**	**Sales**	**Quantity**	**Sales**	**Quantity**	**Sales**
IC (thousand pieces)	854,381	23,322,421	1,051,363	26,349,948	1,002,456	29,410,554	1,244,477	37,494,168
Others	–	35,137	–	34,741	–	47,973	–	72,823
Total	854,381	23,357,558	1,051,363	26,384,689	1,002,456	29,458,527	1,244,477	37,566,991

Note: Sales volume and value as shown above has not deducted sales returns and allowances.

III. Employees

Employee breakdown over the past two calendar years and up until the date of the Report's publication.

Year		2018	2019	As of March 31, 2020
Number	Research and Development	4,183	4,487	4,560
	Administration and Sales	421	486	500
	Production and Testing	156	182	187
	Total	4,760	5,155	5,247
Average Age		33.52	34.63	34.75
Average Years of Service		6.28	6.43	6.47
Education	Ph.D./Master's	71.37%	71.02%	71.03%
	University/College Degree	23.84%	26.71%	26.7%
	High School/Vocational High School Degree	4.79%	2.27%	2.27%

Note: Data are based on the Company's consolidated statements, including employees of the Company and its subsidiaries.

IV. Environmental Expenses

1. The Company did not incur any losses, penalties or liabilities due to environmental pollution during the previous calendar year or up until the date of the Report's publication.

2. The Company passed ISO 14001 Environmental Management Systems certification on September 22, 2006. It was recertified on December 25, 2014, and passed the latest version of ISO 14001 on August 16, 2017.

V. Labor Relations

1. Summary of the Company's employee benefits, continuing education, training, pension plan and implementation results, as well as labor agreements and measures to uphold employee rights.

(1) Wages and Benefits

i. Highly competitive wages.

ii. In accordance with the Company's annual operational status, the Company offers annual raises, year-end bonuses, and Company-wide dividends so that employees can share the operations results with the company.

iii. Five-day workweek and flexible office hours.

iv. The Company's people-oriented management system values employees and provides excellent communication channels and promotion opportunities.
v. The Company sets up and subsidizes cafeterias, cafes, and convenience stores to provide diverse food and beverage services at discounted prices.
vi. Besides labor and health insurance, the Company offers an employee group insurance and business insurance plans to bolster employee protections.
vii. Free annual health examinations help employees manage their health. Doctors and nurses offer consultations at the Company's nursing station, and a Company-designed health care card further supports employees' wellbeing.
viii. The Company provides well-equipped breastfeeding rooms to support female employees who need to pump milk or breastfeed.
ix. The Company offers New Year's bonuses as well as wedding and funeral subsidies.
x. The Company offers leisure and recreational facilities based on 10 major themes. Employees use the facilities on weekdays and weekends for fitness, reading, study, games, health management, and other activities.
xi. The Reading Room has an abundant collection of books and recorded media that employees can use free of charge.
xii. The Employee Assistance Program offers psychological and legal counseling. Professional massage therapists offer stress relieving full-body, neck and shoulder, and foot massages.
xiii. The Employee Welfare Committee regularly offers diverse, professional lectures. Various group activities and sporting competitions as well as a wide selection of Realtek special contract stores further enrich workers' lifestyles.
xiv. The Employee Welfare Committee provides New Year's and birthday gift vouchers, travel subsidies, and a handsome flexible benefit fund.
xv. The Company holds family day events, year-end parties, and other activities.
xvi. Employees can conveniently park free-of-charge in the Company parking lots.

(2) Realtek Educational Training, and Development

Talent is a key requirement for building intellectual power, blazing competitive new trails, and fostering sustainable operations. The Company's greatest assets in these pursuits are the professionals of various fields who compose its workforce. In order to sustain competitiveness and develop new talent, the Company founded the Realtek Corporate University, which offers classes covering topics such as professional R&D, leadership development, organizational operations, and spontaneous learning. This initiative is part of the comprehensive education and training plans the Company offers to help all employees raise their capabilities to new heights.

i. New Employee Training Camps
Orientation for new employees focuses on teamwork, innovation and vitality to help new team members quickly adapt to the Company's corporate lifestyle and culture.
ii. Professional R&D Training
Each year the Company holds more than 100 education and training courses for new R&D staff to quickly raise their professional capabilities. It invites R&D experts from Taiwan and overseas to share their knowledge and techniques. Employees can also join fully subsidized

external training courses.

iii. Management and Leadership Training

Besides providing management training to employees based on their rank and role, the Company fully subsidizes training classes for employees at external institutions.

iv. Self-Study and Development

The Company offers open, diverse study environments and contents. It maintains awareness of employees' learning and development while taking into account their professional needs and lifestyle aspirations. Diversity, timeliness, and convenience are distinguishing features of our planning.

v. Tailored Professional Development Plans

A combination of traditional and on-line classes offers flexible professional development plans tailored to the specific needs of every employee. Raising the R&D capabilities of each individual and team gives the Company a workforce with diverse professional knowledge.

(3) Pension System

The Company established pension plans and created a Supervisory Committee of Labor Retirement Reserve to manage pension payments for regular employees in accordance with the "Labor Standards Act." From 1995, it appropriated labor pension reserve funds each month based on pension actuarial evaluations. From July 1, 2005, it utilized a defined contribution system for employees who are ROC nationals in accordance with the "Labor Pension Act." At least 6% of the worker's monthly wages are paid into his or her Individual Account of Labor Pension at the Bureau of Labor Insurance. Employees receive monthly retirement payments calculated based upon their individual account balance and other factors or claim their pension in a lump-sum payment.

(4) Labor Agreements and Upholding Worker Rights

i. The Company's intranet offers a forum that gives employees immediate access to management.
ii. The Company holds worker-employer meetings as a positive mechanism for communication.
iii. The Company sets up two-way communication channel (CEO mailbox) for employees to speak their voices.
iv. At regular departmental/unit meetings, employees can voice their opinions on problems.
v. The Company has a sexual harassment prevention hotline and a prevention plan against unlawful violation to provide a safe work environment that puts employees' minds at ease.
v. The Company has an Employee Care and Consultation Center.

2. The Company did not incur any losses due to labor disputes during the past calendar year and up until the date of publication of this Report.

VI. Significant Agreements

Agreement Type	Signatory	Contract Validity	Summary	Limitations
Rental Agreements 4 Items	Hsinchu Science Park Bureau	Sep, 2010~Dec, 2022 Mar, 2014~Dec, 2027 Sep, 2020~Dec, 2039	The lessee shall build a factory, warehouse, or laboratory or use the site for storage and delivery, loading and unloading, packaging, or repairs and maintenance.	The site must be used to build a factory, warehouse, or laboratory, or to conduct business-related tasks such as storage and delivery, loading and unloading, packaging, or repairs and maintenance.

Financial Status, Operating Results and Status of Risk Management

I. Financial Status

Unit: NT$ thousands

Item / Year	2019	2018	Changes	% of Changes
Current Assets	64,289,591	51,153,278	13,136,313	25.68%
Non-current assets	9,142,239	7,099,036	2,043,203	28.78%
Total assets	73,431,830	58,252,314	15,179,516	26.06%
Current liabilities	43,970,187	32,502,254	11,467,933	35.28%
Non-current liabilities	2,232,959	1,103,161	1,129,798	102.41%
Total Liabilities	46,203,146	33,605,415	12,597,731	37.49%
Share capital	5,080,955	5,080,955	0	0%
Capital surplus	2,736,854	3,236,659	(499,805)	(15.44%)
Retained earnings	19,618,212	15,917,714	3,700,498	23.25%
Other equity	(217,036)	401,964	(619,000)	(153.99%)
Non-controlling interest	9,699	9,607	92	0.96%
Total Equity	27,228,684	24,646,899	2,581,785	10.48%

Analysis of Changes equal to or over 20%

1.Increase in Current assets: Mainly due to increase in financial assets at amortized cost-current and accounts receivable.

2.Increase in Non-current assets: Mainly due to increase in right-of-use assents.

3.Increase in Current liabilities : Mainly due to increase in short-term borrowings, accounts payable, and other current liabilities.

4.Increase in Non-current liabilities: Mainly due to increase in lease liabilities.

5.Increased in Retained earnings: Mainly due to increase in net income.

6.Decrease in Other equity: Mainly due to decrease in financial statements translation differences of foreign operations.

II. Operational Results

Unit: NT$ thousands

Item \ Year	2019	2018	Changes	% of Changes
Operating revenue	60,744,006	45,805,746	14,938,260	32.61%
Operating costs	(34,160,690)	(25,344,876)	(8,815,814)	34.78%
Gross profit	26,583,316	20,460,870	6,122,446	29.92%
Operating expenses	(20,252,451)	(16,696,410)	(3,556,041)	21.30%
Operating income	6,330,865	3,764,460	2,566,405	68.17%
Non-operating income and expenses	905,007	892,741	12,266	1.37%
Profit before income tax, net	7,235,872	4,657,201	2,578,671	55.37%
Income tax expense	(445,497)	(306,420)	(139,077)	45.39%
Net income for the year	6,790,375	4,350,781	2,439,594	56.07%

Analysis of Changes equal to or over 20%

1.Increase in Operating revenue and Operating costs: Mainly due to increase in operating revenue.

2.Increase in Operating expenses：Mainly due to increase in research and development expenses.

3.Increase in Profit before income tax, net：Mainly due to increase in operating income.

III. Cash Flow

1. Analysis of the Change in Cash Flow in 2019

Unit: NT$ thousands

The beginning of Cash Balance (1)	Net Cash Provided by Operating Activities (2)	Net Cash Used in Investing and Financing Activities (3)	The end of Cash Balance (1)+(2)-(3)	Remedy for Cash Shortage	
				Investment plan	Financial leverage plan
4,309,651	12,251,285	10,833,025	5,727,911	—	—

Analysis of the Change in Cash Flow:

(1) Operating activities: Net cash inflow is mainly due to increase in operating income.

(2) Investing activities: Net cash outflow is mainly due to increase in financial assets at amortized cost and intangible assets.

(3) Financing activities: Net cash inflow is mainly due to increase in short-term borrowings.

2. Cash Flow Projection for Next Year: Not applicable.

IV. Impact on Financial and Business associated with Major Capital Expenditures in recent years: None.

V. Investment Policies in recent years, the reasons for losses and plans to improve for next year:

Our investment policies are based on strategic investments. The investment losses accounted for under equity method in 2019 was approximately NT$23,833 thousand. We will continuously focus on strategic investment and prudently evaluate investment plans in the future.

VI. Risk Items

1. The effect upon the profits (or losses) of interest and exchange rate fluctuations and changes in the inflation rate, and response measures to be taken in the future.

   Our exposure to interest rate risks arises from time deposits or short-term loans with floating rates, which is not significant and normally incurred to support our operating activities. The Realtek Group is a multinational group in the Electronics industry. Currently, the majority of our revenues are denominated in USD. Our operating expenses are incurred in several currencies, primarily in USD, NTD, and RMB. After offsetting assets and liabilities between the same currency, the natural hedge is used to reduce the foreign exchange risk. Inflation risk does not have a significant impact on the results of our operating activities.

2. The policy regarding high-risk investments, highly leveraged investments, loans to other parties, endorsements and guarantees, and derivatives transactions, the main reasons for the profits/losses generated thereby, and response measures to be taken in the future:

   The Realtek Group adopts a conservative investment policy and doesn't engage in high-risk investments or highly leveraged investments.

   The Realtek Group has formulated its procedures for Loaning Funds to Others, Procedures for Endorsements and Guarantees, and Procedures for Financial Derivatives Transactions in compliance with these Regulations. These procedures are aimed at improving operational performance and reducing financial risk.

3. Future R&D plans and expected R&D spending:

   We will continuously research in chips regarding the area of communication networks, computer peripherals and multimedia. In addition, we will actively recruit outstanding R&D talents and invest in the best R&D resources and develop key technologies or obtain necessary licensed technology. The expected R&D spending for next year will be approximately NT$17.6 billion.

4. Impact on finance and business associated with changes in domestic and foreign regulations and laws, and corresponding reactions: None.

5. Impact on finance and business associated with new technology and industry changes, and corresponding reactions:

   We pay attention to the trend of future technology at all times. At present, we not only devote to timely launch new products but also continuously enhance product functions and technical specifications in line with market trends and customer needs in order to strength our competitiveness and increase our market shares .

6. Impact on Company's crisis management associated with changes in corporate image, and corresponding reactions:

   Our corporate culture is "self-confidence and trust in people". Integrity is the central core of our corporate culture. We will keep in a good standing of image according to our corporate culture.

7. Risks and expected benefits associated with mergers and acquisitions, and corresponding reactions: None.

8. Risks and expected benefits associated with facility expansion, and corresponding reactions:
   In order to meet the needs of future growth and operating development, the board of directors has resolved to build and purchase factory & office buildings and parking garage. Currently, there are no risks for us.

9. Risks associated with Purchase and sales Concentration and corresponding reactions:
   The Company's raw material is wafer. We have maintained a good cooperated-relationship with foundries. As for the purchase, we have not concentrated on a single foundry. The wafer supply is sufficient and stable. Moreover, we also have not concentrated on a single customer and the collection period is implemented in accordance with company policies and there is no abnormal situation.

10. Impact and risks to the Company associated with significant transfer of shares by the Company's Directors and major Shareholders who own 10% or more of the Company's outstanding shares, and corresponding reactions: None.

11. Impact to the Company associated with change in management, and corresponding reactions: None.

12. Litigious and non-litigious matters:
    The Company, Directors, President, responsible Person, major Shareholders who own 10% or more of the Company's total outstanding shares, and affiliated companies are not involved in final and un-appealable judgments or significant litigious and non-litigious proceedings or administrative disputes.

13. Disclosure of Information Security Risks
    In order to ensure stable operations, the Company built a series of security systems for its computer networks and data center servers and implemented corresponding operating procedures. Regular inspections ensure effectiveness. Despite these measures, ongoing expansion and evolution of security threats combined with more advanced cyberattacks make it impossible to guarantee that all online attack or hacks can be thwarted. When the Company's internal systems or data center servers are attacked or infected with a virus, malware, or ransomware, cybercriminals can destroy important data, steal information, disrupt networks and applications, hijack computers, or encrypt data to hold it for ransom. Consequences can be severe. Delayed or disrupted orders can lead to compensation claims from customers. Expensive repairs or system upgrades may be necessary. The Company could even face major legal responsibility or fines for failing to protect the information of its customers or third parties. In 2019, the Company did not detect any major cyberattacks and information security incidents that could affect operations seriously, nor has it been implicated in any information security related legal case.

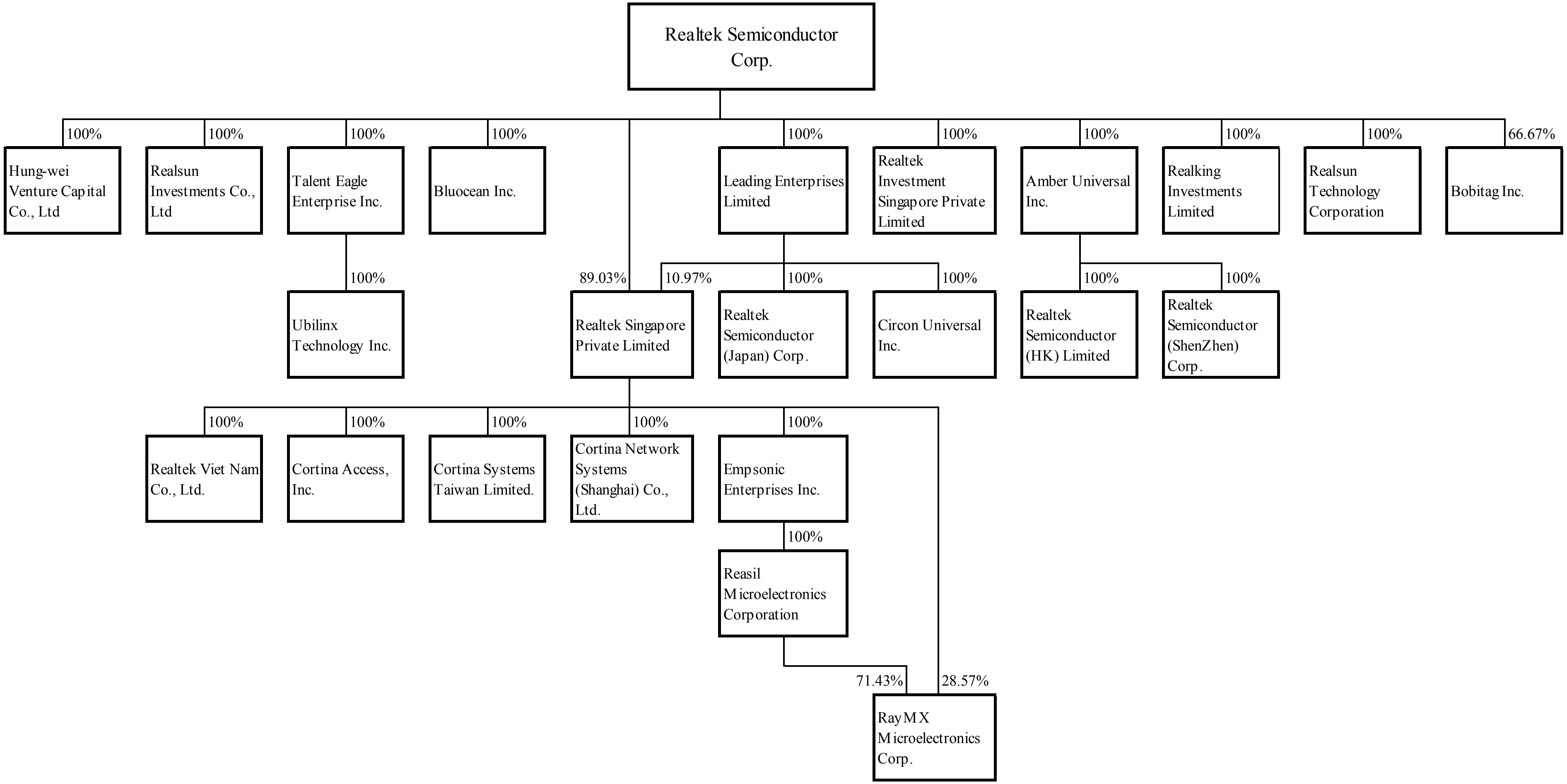
VII. Other Material Events: None.

Special Items

I. Information of Affiliated Companies

1. Consolidated Business Report of the Affiliated Companies

1.1. Chart of the Affiliated Companies



1.2. Basic information of the Affiliated Companies

Unit: dollars / Dec. 31, 2019

Company Name	Date of Incorporation	Place of Registration	Paid-in Capital	Main Business Activities
Leading Enterprises Limited	1998.04	British Virgin Islands	USD39,130,000	Investment holdings
Amber Universal Inc.	1998.10	British Virgin Islands	USD41,432,000	Investment holdings
Circon Universal Inc.	2002.01	Mauritius	USD64,800,000	Investment holdings
Empsonic Enterprises Inc.	2002.06	Mauritius	USD28,250,000	Investment holdings
Bluocean Inc.	2016.02	Cayman Islands	USD110,050,000	Investment holdings
Talent Eagle Enterprise Inc.	2016.02	Cayman Islands	USD114,100,000	Investment holdings
Realsun Investments Co., Ltd	1998.06	Taiwan	NTD280,000,000	Investment holdings
Hung-wei Venture Capital Co., Ltd	1999.12	Taiwan	NTD250,000,000	Investment holdings
Realking Investments Limited	2000.04	Taiwan	NTD293,929,850	Investment holdings
Realsun Technology Corporation	2004.12	Taiwan	NTD5,000,000	ICs manufacturing, design, research, development, sales, and marketing
Bobitag Inc.	2012.12	Taiwan	NTD28,783,650	Manufacture and installation of computer equipment and wholesale, retail and related service of electronic materials and information/software
Cortina Systems Taiwan Limited.	2015.04	Taiwan	NTD211,300,000	R&D and technical support
Realtek Semiconductor (Japan) Corp.	2001.12	Japan	JYY20,000,000	ICs design, sales and consultancy
Realtek Semiconductor (HK) Limited	1999.09	Hong Kong	HKD1,500,000	Information services and technical support
Realtek Semiconductor (ShenZhen) Corp.	2004.07	China	USD5,000,000	R&D and technical support
Cortina Network Systems (Shanghai) Co., Ltd.	2015.04	China	USD1,650,000	R&D and technical support
Reasil Microelectronics Corporation	2001.12	China	USD28,000,000	R&D and technical support
RayMX Microelectronics Corporation	2018.12	China	CNY26,250,000	ICs manufacturing, design, research, development, sales, and marketing
Realtek Investment Singapore Private Limited	2016.08	Singapore	USD200,000,000	Investment holdings
Realtek Singapore Private Limited	2013.10	Singapore	USD89,856,425	ICs manufacturing, design, research, development, sales, and marketing
Cortina Access, Inc.	2015.04	United States	USD13,148,179.73	R&D and information services
Ubilinx Technology Inc.	2016.08	United States	USD40,000,000	R&D and information services
Realtek Viet Nam Co., Ltd	2018.09	Vietnam	USD1,000,000	R&D and technical support

1.3. The shareholders in common of the Affiliates presumed to have a relationship of control and subordination: None.

1.4. The industries covered by the business operated by the affiliates overall

Company Name	Main Business Activities	Division of Work Among the Affiliates
Leading Enterprises Limited	Investment holdings	Not applicable
Amber Universal Inc.	Investment holdings	Not applicable
Circon Universal Inc.	Investment holdings	Not applicable
Empsonic Enterprises Inc.	Investment holdings	Not applicable
Bluocean Inc.	Investment holdings	Not applicable
Talent Eagle Enterprise Inc.	Investment holdings	Not applicable
Realsun Investments Co., Ltd	Investment holdings	Not applicable
Hung-wei Venture Capital Co., Ltd	Investment holdings	Not applicable
Realking Investments Limited	Investment holdings	Not applicable
Realsun Technology Corporation	ICs manufacturing, design, research, development, sales, and marketing	Not applicable
Bobitag Inc.	Manufacture and installation of computer equipment and wholesale, retail and related service of electronic materials and information/software	Not applicable
Cortina Systems Taiwan Limited.	R&D and technical support	Provide research and development and technical services
Realtek Semiconductor (Japan) Corp.	ICs design, sales and consultancy	Provide sales and technical services
Realtek Semiconductor (HK) Limited	Information services and technical support	Not applicable
Realtek Semiconductor (ShenZhen) Corp.	R&D and technical support	Provide research and development and technical services
Cortina Network Systems (Shanghai) Co., Ltd.	R&D and technical support	Provide research and development and technical services
Reasil Microelectronics Corporation	R&D and technical support	Provide research and development and technical services
RayMX Microelectronics Corporation	ICs manufacturing, design, research, development, sales, and marketing	Not applicable
Realtek Investment Singapore Private Limited	Investment holdings	Not applicable
Realtek Singapore Private Limited	ICs manufacturing, design, research, development, sales, and marketing	Not applicable
Cortina Access, Inc.	R&D and information services	Provide consultancy and services
Ubilinx Technology Inc.	R&D and information services	Provide consultancy and services
Realtek Viet Nam Co., Ltd.	R&D and technical support	Provide research and development and technical services

1.5. Directors, Supervisors, and Presidents of the Affiliates

Unit: shares/NT$ thousands;%

Company Name	Title (note 1)	Name	Shareholding (note 2)	
			Shares/ Investment Amount	% of Investment Holding
Leading Enterprises Limited	Director	Realtek Semiconductor Corp. (Representative: Yeh, Po-Len)	39,130	100%
Amber Universal Inc.	Director	Realtek Semiconductor Corp. (Representative: Yeh, Po-Len)	41,432	100%
Bluocean Inc.	Director	Realtek Semiconductor Corp. (Representative: Yeh, Nan-Horng)	110,050,000	100%
Talent Eagle Enterprise Inc.	Director	Realtek Semiconductor Corp. (Representative: Yeh, Nan-Horng)	114,100,000	100%
Realsun Investments Co., Ltd	Chairman and President	Realtek Semiconductor Corp. (Representative: Huang, Yee-Wei)	28,000,000	100%
	Director	Realtek Semiconductor Corp. (Representative: Huang, Yung-Fang)	28,000,000	100%
	Director	Realtek Semiconductor Corp. (Representative: Chern, Kuo-Jong)	28,000,000	100%
	Supervisor	Realtek Semiconductor Corp. (Representative: Chiang, Ting-Chi)	28,000,000	100%
Hung-wei Venture Capital Co., Ltd	Chairman	Realtek Semiconductor Corp. (Representative: Yeh, Po-Len)	25,000,000	100%
	Director and President	Realtek Semiconductor Corp. (Representative: Chiu, Sun-Chien)	25,000,000	100%
	Director	Realtek Semiconductor Corp. (Representative: Huang, Yung-Fang)	25,000,000	100%
	Supervisor	Realtek Semiconductor Corp. (Representative: Chiang, Ting-Chi)	25,000,000	100%
Realking Investments Limited	Chairman	Realtek Semiconductor Corp. (Representative: Yeh, Po-Len)	29,392,985	100%
	Director and President	Realtek Semiconductor Corp. (Representative: Chiu, Sun-Chien)	29,392,985	100%
	Director	Realtek Semiconductor Corp. (Representative: Huang, Yung-Fang)	29,392,985	100%
	Supervisor	Realtek Semiconductor Corp. (Representative: Chiang, Ting-Chi)	29,392,985	100%

Company Name	Title (note 1)	Name	Shareholding (note 2)	
			Shares/ Investment Amount	% of Investment Holding
Realsun Technology Corporation	Chairman	Realtek Semiconductor Corp. (Representative: Yeh, Po-Len)	500,000	100%
	Director	Realtek Semiconductor Corp. (Representative: Chiu, Sun-Chien)	500,000	100%
	Director	Realtek Semiconductor Corp. (Representative: Huang, Yung-Fang)	500,000	100%
	Supervisor	Realtek Semiconductor Corp. (Representative: Chern, Kuo-Jong)	500,000	100%
Circon Universal Inc.	Director	Leading Enterprises Limited (Representative: Yeh, Po- Len)	64,800,000	100%
Realtek Semiconductor (Japan) Corp.	Director and President	Cheng, Shu-Chien	-	-
	Director	Chiu, Sun-Chien	-	-
	Director	Tung Nien-Tsu	-	-
	Supervisor	Chiang, Ting-Chi	-	-
Empsonic Enterprises Inc.	Chairman	Realtek Singapore Private Limited (Representative: Huang, Yung-Fang)	2,825,000	100%
	Director	Realtek Singapore Private Limited (Representative: Yen, Kuang-Yu)	2,825,000	100%
	Director	Realtek Singapore Private Limited (Representative: Lin, Tsung-Ming)	2,825,000	100%
Realtek Semiconductor (HK) Limited	Director	Amber Universal Inc. (Representative: Yeh, Po-Len)	HK$1,500,000	100%
	Director	Lin, Ying-Hsi	-	-
Realtek Semiconductor (ShenZhen) Corp.	Director and President	Chern, Kuo-Jong	-	-
Ubilinx Technology Inc.	Director	Chiang, Ting-Chi	-	-
	Director	Chen, Chin	-	-
	Director	Lin, Yung-Chieh	-	-
Reasil Microelectronics Corporation	Chairman	Yeh, Nan-Horng	-	-
	Director and President	Yeh, Ta-Hsun	-	-
	Director	Chiou, Mhu-Hsiu	-	-
	Supervisor	Chern, Kuo-Jong	-	-

Company Name	Title (note 1)	Name	Shareholding (note 2)	
			Shares/ Investment Amount	% of Investment Holding
Bobitag Inc.	Chairman and President	Realtek Semiconductor Corp. (Representative: Chiang, Ting-Chi)	1,918,910	66.67%
	Director	Realtek Semiconductor Corp. (Representative: Lin, Yung-Chieh)	1,918,910	66.67%
	Director	Realtek Semiconductor Corp. (Representative: Chan, Te-Chuan)	1,918,910	66.67%
	Supervisor	Guo, Yu-zhi	0	0
Realtek Singapore Private Limited	Chairman	Huang, Yung-Fang	-	-
	Director and President	Yen, Kuang-Yu	-	-
	Director	Lin, Tsung-Ming	-	-
Realtek Investment Singapore Private Limited	Chairman	Huang, Yung-Fang	-	-
	Director and President	Yen, Kuang-Yu	-	-
	Director	Chang, Jr-Neng	-	-
Cortina Access, Inc.	Director	Huang, Yung-Fang	-	-
	Director	Yen, Kuang-Yu	-	-
	Director	Zeineddine Chair	-	-
Cortina Network Systems (Shanghai) Co., Ltd.	Director	Zeineddine Chair	-	-
	Supervisor	Ke, Chieh-Yuan	-	-
Cortina Systems Taiwan Limited.	Chairman	Realtek Singapore Private Limited (Representative: Huang, Yung-Fang)	21,130,000	100%
	Director	Realtek Singapore Private Limited (Representative: Yen, Kuang-Yu)	21,130,000	100%
	Director	Realtek Singapore Private Limited (Representative: Hsiao, Wang-Mien)	21,130,000	100%
	Supervisor	Realtek Singapore Private Limited (Representative: Lin, Yung-Chieh)	21,130,000	100%

Company Name	Title (note 1)	Name	Shareholding (note 2)	
			Shares/ Investment Amount	% of Investment Holding
Realtek Viet Nam Co., Ltd.	Director	Soh Wei Kwek	-	-
	Director	Kao Shu-yi	-	-
	Director	Nguyen Phuoc Vinh Thang	-	-
RayMX Microelectronics Corporation	Chairman	Tsai, Jon-Jinn	-	-
	Director and President	Zhu, Ying-hui	-	-
	Director	Su, Chu-Ting	-	-
	Director	Chen, Chih-tung	-	-
	Director	Chien, Chih-Ching	-	-
	Supervisor	Wu, Wen-Bin	-	-
	Supervisor	Lin, Yung-Chieh	-	-
	Supervisor	Liu, Shuan-Ta	-	-

Note 1: If the affiliates are foreign companies, list the same positions as domestic.
Note 2: The shares are the total of shareholdings directly or indirectly held; if the affiliates do not issue shares, the shareholdings are presented by the investment amount.
Note 3: The above information up to March 31, 2020

1.6. Operation Highlights of the Affiliates

Unit: NT$ thousands

Company	Paid in Capital	Assets	Liabilities	Equity	Operating revenue	Operation Income	Net Income for the year (After Taxes)	EPS (After Taxes)
Leading Enterprises Limited	15,005,734	14,398,425	3,247,386	11,151,039	0	(687,748)	282,019	-
Amber Universal Inc.	4,739,146	3,915,562	603,387	3,312,175	0	(12,381)	87,008	-
Bluocean Inc.	3,313,165	6,511,485	3,032,094	3,479,391	0	(18,052)	111,913	-
Talent Eagle Enterprise Inc.	3,435,095	9,553,342	6,967,844	2,585,498	0	(5,430)	(278,776)	-
Hung-wei Venture Capital Co., Ltd	250,000	424,046	5,608	418,438	0	(3,007)	19,668	0.79
Realsun Investments Co., Ltd	280,000	354,695	214	354,481	0	(101)	6,966	0.25
Realking Investments Limited	293,930	286,983	44	286,939	0	(49)	(1,384)	(0.05)
Realsun Technology Corporation	5,000	5,107	0	5,107	0	(0)	47	0.09
Realtek Semiconductor (Japan) Corp.	5,542	6,919	4,436	2,483	69,240	(611)	255	-
Circon Universial Inc.	1,950,869	8,151	0	8,151	0	(118)	6	-
Empsonic Enterprises Inc.	850,495	1,455,628	0	1,455,628	0	0	98,711	-
Reasil Microelectronics Corporation	842,968	1,860,648	409,850	1,450,798	1,036,024	77,567	99,574	-
Ubilinx Technology, Inc	1,204,240	165,899	124,007	41,892	0	(408,848)	(413,581)	-
Realtek Semiconductor (HK) Limited	5,799	1,159	0	1,159	0	(26)	(25)	-
Realtek Semiconductor (ShenZhen) Corp.	150,530	333,319	79,336	253,983	348,116	15,826	22,194	-
Bobitag Inc.	19,189	29,197	100	29,097	0	(30)	277	0.14
Realtek Singapore Private Limited	3,666,058	17,421,040	5,742,345	11,678,695	19,705,002	5,999,284	6,306,957	-
Realtek Investment Singapore Private Limited	6,021,200	6,494,453	0	6,494,453	0	(198)	203,956	-
Cortina Access, Inc.	1,229,710	804,993	68,443	736,550	214,462	13,980	30,063	-
Cortina Network Systems (Shanghai) Co., Ltd.	108,382	195,089	31,970	163,119	106,520	2,840	7,476	-
Cortina Systems Taiwan Limited.	60,212	88,220	11,701	76,519	96,718	5,475	5,371	0.89
Realtek Viet Nam Co., Ltd	30,106	27,034	7,274	19,760	0	(9,288)	(9,032)	-
RayMX Microelectronics Corporation	113,445	260,356	175,125	85,231	250,159	(26,581)	(28,097)	-

2. Affiliated Entities Consolidated Financial Statements:

The entities included in the consolidated financial statements are the same as the entities pursuant to the financial accounting standards to be included in the consolidated financial statements of the Parent Company. Therefore, please refer to consolidated financial reports for consolidated financial statement of affiliated entities.

II. Significant events with impact on shareholders' rights or stock price regulated in Article 36-3-2 of the Securities and Exchange Act happened during last year to the date of the annual report printed: None

III. Acquisition or disposal of Realtek shares by subsidiaries during last year to the date of the annual report printed: None

IV. Issuance of private placement securities: None

V. Other Necessary Supplements: None

Financial Information

I. Condensed balance sheet and Statement of Comprehensive Income, independent auditor's name and audit opinion in the recent five years

1. Condensed Balance Sheet

1.1. Condensed Consolidated Balance Sheet

Unit: NT$ thousands

Item	Year	2015	2016	2017	2018	2019
Current assets		37,556,687	47,956,677	45,092,540	51,153,278	64,289,591
Property, plant and equipment		3,380,051	3,192,717	3,162,949	3,316,578	3,446,162
Right-of-use assets		—	—	—	—	1,403,245
Intangible assets		2,819,814	2,244,532	2,078,355	1,686,249	1,952,960
Other non-current assets		83,591	41,074	41,021	50,169	61,646
Total assets		46,947,448	55,519,808	52,310,913	58,252,314	73,431,830
Current liabilities	Before distribution	23,748,641	31,816,328	29,520,661	32,502,254	43,970,187
	After distribution	25,768,446	34,180,149	32,135,601	36,058,922	—
Non-current liabilities		908,926	878,708	931,140	1,103,161	2,232,959
Total liabilities	Before distribution	24,657,567	32,695,036	30,451,801	33,605,415	46,203,146
	After distribution	26,677,372	35,058,857	33,066,741	37,162,083	—
Equity attributable to owners of the parent company		22,280,256	22,815,185	21,849,518	24,637,292	27,218,985
Share capital		5,049,513	5,049,513	5,065,062	5,080,955	5,080,955
Capital surplus		4,405,169	3,910,428	3,558,856	3,236,659	2,736,854
Retained earnings	Before distribution	10,947,862	12,453,695	13,826,043	15,917,714	19,618,212
	After distribution	9,433,008	10,433,890	11,211,304	12,869,141	—
Other equity interest		1,877,712	1,401,549	(600,443)	401,964	(217,036)
Treasury shares		—	—	—	—	—
Non-controlling interest		9,625	9,587	9,594	9,607	9,699
Total Equity	Before distribution	22,289,881	22,824,772	21,859,112	24,646,899	27,228,684
	After distribution	20,270,076	20,460,951	19,244,373	21,090,457	—

Note：1. The above annual financial statements are audited by independent auditors.
2. The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards).
3. 2019 Distribution is approved by the Board of Directors.

1.2. Condensed Balance Sheet – Parent Company

Unit: NT$ thousands

Item / Year		2015	2016	2017	2018	2019
Current assets		20,627,261	16,506,277	12,587,447	13,962,708	22,953,769
Property, plant and equipment		2,753,834	2,700,331	2,679,455	2,863,756	3,019,258
Right-of-use assets		-	-	-	-	1,091,607
Intangible assets		1,733,839	1,604,684	1,495,547	1,160,549	1,652,722
Other non-current assets		25,082	6,356	6,456	14,444	46,151
Total assets		43,968,669	47,739,038	50,512,739	53,992,856	67,445,996
Current abilities	Before distribution	21,616,457	24,550,306	28,199,217	28,733,410	39,316,733
	After distribution	23,636,262	26,914,127	30,814,157	32,290,078	—
Non-current liabilities		71,956	373,547	464,004	622,154	910,278
Total liabilities	Before distribution	21,688,413	24,923,853	28,663,221	29,355,564	40,227,011
	After distribution	23,708,218	27,287,674	31,278,161	32,912,232	—
Share capital		5,049,513	5,049,513	5,065,062	5,080,955	5,080,955
Capital surplus		4,405,169	3,910,428	3,558,856	3,236,659	2,736,854
Retained earnings	Before distribution	10,947,862	12,453,695	13,826,043	15,917,714	19,618,212
	After distribution	9,433,008	10,433,890	11,211,304	12,869,141	—
Other equity interest		1,877,712	1,401,549	(600,443)	401,964	(217,036)
Treasury shares		—	—	—	—	—
Total Equity	Before distribution	22,280,256	22,815,185	21,849,518	24,637,292	27,218,985
	After distribution	20,260,451	20,451,364	19,234,779	21,080,850	—

Note: 1. The above annual financial statements are audited by independent auditors.
2. The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards).
3. 2019 Distribution is approved by the Board of Directors.

2. Condensed Statement of Comprehensive Income

2.1. Condensed Consolidated Statement of Comprehensive Income

Unit: NT$ thousands

Item \ Year	2015	2016	2017	2018	2019
Operating revenue	31,745,809	38,914,031	41,688,021	45,805,746	60,744,006
Gross Profit	13,590,365	16,896,737	17,903,422	20,460,870	26,583,316
Operating income	1,820,105	3,342,764	3,204,237	3,764,460	6,330,865
Non-operating income(expenses)	802,629	(7,378)	422,116	892,741	905,007
Net income before income tax, net	2,622,734	3,335,386	3,626,353	4,657,201	7,235,872
Income From Operations of Continued Segments	2,427,873	3,039,837	3,392,160	4,350,781	6,790,375
Income (Loss) From Operations of Discontinued Segments	—	—	—	—	—
Net income for the year	2,427,873	3,039,837	3,392,160	4,350,781	6,790,375
Total Comprehensive income for the year	3,213,433	2,563,674	1,390,168	5,054,264	6,130,163
Net Profit Attributable to: Owner of the Company	2,427,999	3,039,875	3,392,153	4,350,768	6,790,283
Net Profit(loss) Attributable to: Non-controlling interests	(126)	(38)	7	13	92
Total Comprehensive Income Attributable to: Owner of the Company	3,213,559	2,563,712	1,390,161	5,054,251	6,130,071
Total Comprehensive Income (Loss) Attributable to: Non-controlling interests	(126)	(38)	7	13	92
Earnings per share	4.81	6.02	6.71	8.57	13.36

Note: 1. The above annual financial statements are audited by independent auditors.
2. The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards).

2.2. Condensed Statement of Comprehensive Income – Parent Company

Unit: NT$ thousands

Item \ Year	2015	2016	2017	2018	2019
Operating revenue	23,610,259	29,705,075	30,043,540	32,194,291	40,845,708
Gross Profit	9,566,255	12,395,345	12,168,244	13,288,095	16,202,655
Operating income	677,151	1,599,195	898,802	699,986	1,316,005
Non-operating income	1,960,848	1,720,680	2,703,351	3,938,782	5,912,278
Net income before income tax,net	2,637,999	3,319,875	3,602,153	4,638,768	7,228,283
Income From Operations of Continued Segments	2,427,999	3,039,875	3,392,153	4,350,768	6,790,283
Net Income for the year	2,427,999	3,039,875	3,392,153	4,350,768	6,790,283
Other comprehensive income (Loss), net	785,560	(476,163)	(2,001,992)	703,483	(660,212)
Total Comprehensive income for the year	3,213,559	2,563,712	1,390,161	5,054,251	6,130,071
Earnings per share	4.81	6.02	6.71	8.57	13.36

Note: 1. The above annual financial statements are audited by independent auditors.
2. The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards).

3. Name of Auditors and Issued Opinions in the recent five years

Year	Name of Auditors (CPA)	Audio Opinion
2015	Li, Tien-Yi & Tsang, Kwok-Wah	Modified Unqualified Opinion
2016	Li, Tien-Yi & Tsang, Kwok-Wah	Unqualified Opinions
2017	Hsueh, Seou-Hung & Li, Tien-Yi	Unqualified Opinions
2018	Hsueh, Seou-Hung & Li, Tien-Yi	Unqualified Opinions
2019	Lin, Yu-Kuan & Tsang, Kwok-Wah	Unqualified Opinions

II. Financial Analysis in the Recent Five Years

1. Consolidated Financial Analysis

Item	Year	2015	2016	2017	2018	2019
Capital Structure	Debt ratio (%)	52.52	58.88	58.21	57.68	62.91
	Long-term fund to Property, plant and equipment (%)	659.45	714.90	691.09	743.14	790.11
Liquidity	Current ratio (%)	158.14	150.72	152.74	157.38	146.21
	Quick ratio (%)	137.67	133.65	132.98	138.43	128.67
	Times interest earned (times)	23.43	23.01	24.77	34.63	45.46
Operating Performance	Average collection turnover (times)	5.71	6.49	6.35	6.32	6.74
	Average collection days	64	56	57	58	54
	Inventory turnover (times)	4.37	5.05	4.29	3.98	4.57
	Payment turnover (times)	3.98	4.93	4.83	4.64	4.95
	Average inventory turnover days	84	72	85	92	80
	Fixed assets turnover (times)	9.4	11.84	13.11	14.13	17.96
	Property, plant and equipment turnover (times)	0.72	0.75	0.77	0.82	0.92
Profitability	Return on total assets (%)	5.77	6.2	6.56	8.1	10.54
	Return on stockholders' equity (%)	10.93	13.47	15.18	18.71	26.17
	Profit before tax to paid-in capital (%)	51.94	66.05	71.59	91.65	142.41
	Profit after tax to net sales (%)	7.64	7.81	8.13	9.49	11.17
	Earnings per share (NT$)	4.81	6.02	6.71	8.57	13.36
Cash Flow	Cash flow ratio (%)	13.58	16.42	12.73	25.20	27.86
	Cash flow adequacy ratio (%)	133.08	121.3	100	109.92	124.89
	Cash flow reinvestment ratio (%)	0.76	11.78	4.58	17.53	26.05
Leverage	Operating leverage	7.55	4.93	5.51	5.31	4.11
	Financial leverage	1.07	1.04	1.05	1.03	1.02

Analysis of Changes equal to or over 20% in the recent two years:
Increase in Times interest earned: Mainly due to increase in net income.
Increase in property, plant, equipment turnover: Mainly due to increase in operating revenue.
Increase in profitability: Mainly due to increase in net income.
Increase in Cash flow reinvestment ratio: Mainly due to increase in cash flows from operating activities.
Decrease in Operating leverage: Mainly due to increase in operating income.

Note: The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards).

2. Financial Analysis-Parent Company

Item	Year	2015	2016	2017	2018	2019
Capital Structure	Debt ratio (%)	49.32	52.2	56.74	54.36	59.64
	Long-term fund to Property, plant and equipment (%)	809.06	844.9	815.44	860.31	901.51
Liquidity	Current ratio (%)	95.42	67.23	44.63	48.59	58.38
	Quick ratio (%)	81.6	53.11	28.10	33.81	43.05
	Times interest earned (Times)	28.35	27.96	25.72	34.55	50.31
Operating Performance	Average collection turnover (Times)	5.59	6.94	6.00	5.66	6.14
	Average collection days	66	52	60	64	59
	Inventory turnover (times)	3.95	5.15	4.22	3.92	4.34
	Payment turnover (times)	3.71	5.11	4.67	4.60	4.87
	Average inventory turnover days	93	70	86	93	84
	Fixed assets turnover (times)	8.59	10.89	11.16	11.61	13.88
	Property, plant and equipment turnover (times)	0.58	0.64	0.61	0.61	0.67
Profitability	Return on total assets (%)	6.2	6.87	7.18	8.57	11.40
	Return on stockholders' equity (%)	10.94	13.48	15.18	18.71	26.18
	Profit before tax to paid-in capital (%)	52.24	65.74	71.11	91.29	142.26
	Profit after tax to net sales (%)	10.28	10.23	11.29	13.51	16.62
	Earnings per share (NT$)	4.81	6.02	6.71	8.57	13.36
Cash Flow	Cash flow ratio (%)	1.62	15.64	6.99	16.13	10.06
	Cash flow adequacy ratio (%)	129.80	103.78	71.41	74.81	59.46
	Cash flow reinvestment ratio (%)	-10.44	6.79	-2.09	6.10	1.26
Leverage	Operating leverage	14.68	10.52	13.72	19.19	12.50
	Financial leverage	1.17	1.08	1.19	1.25	1.12

Analysis of Changes equal to or over 20% in the recent two years:
Increase in Current ratio and Quick ratio: Mainly due to increase cash and cash equivalents and accounts receivable.
Increase in Times interest earned：Mainly due to increase in net income.
Increase in profitability: Mainly due to increase in net income.
Decrease in Cash flow ratio: Mainly due to increase in current liabilities.
Decrease in Cash flow adequacy/reinvestment ratio: Mainly due to increase in cash dividend paid and capital expenditure.
Decrease in Operating leverage: Mainly due to increase in operating income.

Note: The financial statements since 2013 are prepared in accordance with IFRSs (International Financial Reporting Standards)

Glossary:

1. Capital Structure Analysis:
(1). Debt ratio = Total liabilities / Total assets
(2). Long-term fund to property, plant and equipment ratio = (Shareholders' equity + non-current liabilities) / Net property, plant and equipment
2. Liquidity Analysis:
(1). Current ratio = Current assets / Current liabilities
(2). Quick ratio = (Current assets – inventories – prepaid expenses) / Current liabilities
(3). Times interest earned = Earnings before interest and taxes / Interest expenses
3. Operating Performance Analysis:
(1). Average collection turnover = Net sales / Average trade receivables
(2). Days sales outstanding = 365 / Average collection turnover
(3). Average inventory turnover = Operating costs / Average inventory
(4). Average payment turnover = operating costs / Average trade payables
(5). Average inventory turnover days = 365 / Average inventory turnover
(6). Property, plant and equipment turnover = Net sales / Average property, plant and equipment
(7). Total assets turnover = Net sales / total assets
4. Profitability Analysis:
(1). Return on total assets = [Net income + Interest expenses x (1 – tax rate)] / Average total assets
(2). Return on equity attributable to shareholders of the parent = Net income attributable to shareholders of the parent / Average equity attributable to shareholders of the parent
(3). Net margin = Net income / Net sales
(4). Earnings per share = (Net income attributable to shareholders of the parent – preferred stock dividend) / Weighted average number of shares outstanding
5. Cash Flow:
(1). Cash flow ratio = Net cash provided by operating activities / Current Liabilities
(2). Cash flow adequacy ratio = Five-year sum of cash from operations / Five-year sum of capital expenditures, inventory additions, and cash dividend
(3). Cash flow reinvestment ratio = (Cash provided by operating activities – cash dividends) / (Gross property, plant and equipment + long-term investments + other noncurrent assets + working capital)
6. Leverage:
(1). Operating leverage = (Net sales – variable cost) / Operating income
(2). Financial leverage = Operating income / (Operating income – interest expenses)

III. Has the company or its affiliates experienced financial difficulties in the most recent years up to the date of publication of the 2019 annual report: None.

IV. Audit Committee’s Review Report

Audit Committee’s Review Report

The Company's 2019 business report, financial statements and distribution of retained earnings have been prepared by the Board of Directors. The financial statements also have been audited by Pricewaterhouse Coopers' with the opinion that they present fairly the Company’s financial position, operating performance, and cash flows. The Audit Committee has reviewed the business report, financial statements, and distribution of retained earnings, and found no irregularities. We hereby according to Securities and Exchange Act and Company Act submit this report.

To 2020 Annual Shareholders’ Meeting.

Realtek Semiconductor Corp.

Chairman of the Audit Committee: Ou Yang, Wen-Han

March 20, 2020

V. Consolidated Financial Statements

REPORT OF INDEPENDENT ACCOUNTANTS TRANSLATED FROM CHINESE

PWCR 19000228

To the Board of Directors and Shareholders of Realtek Semiconductor Corporation

Opinion

We have audited the accompanying consolidated balance sheets of Realtek Semiconductor Corporation and its subsidiaries (the "Group") as at December 31, 2019 and 2018, and the related consolidated statements of comprehensive income, of changes in equity and of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the reports of other independent accountants (please refer to the *Other matters* section of our report), the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2019 and 2018, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission.

Basis for opinion

We conducted our audits in accordance with the "Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants" and generally accepted auditing standards in the Republic of China ("ROC GAAS"). Our responsibilities under those standards are further described in the Independent Accountant's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the Code of Professional Ethics for Certified Public Accountants in the Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. Based on our audits and the report of the other independent accountants, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and, in forming our opinion thereon, we do not provide a separate opinion on these matters.

Key audit matters for the Group's consolidated financial statements of the current period are stated as follows:

Existence of cash in banks

Description

Refer to Notes 4(6) and 4(9) of the consolidated financial statements for the accounting policies on cash and cash equivalents and time deposits that do not qualify as cash equivalents. The balance of cash and cash equivalents was NT$5,727,911 thousand, constituting 8% of the consolidated total assets as of December 31, 2019, as described in Note 6(1) of the consolidated financial statements. Time deposits that do not meet the definition of cash and cash equivalents, which refers to short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value are classified as "financial assets at amortised cost - current". The balance of these time deposits amounted to NT$39,558,054 thousand, constituting 54% of consolidated total assets, refer to Note 6(4) of the consolidated financial statements for the details. The abovementioned assets constituted 62% of the total assets, have a significant impact on the consolidated financial statements, the nature and usage of those bank accounts varies, and the Group transacts with various financial institutions, thus, audit of cash in bank was considered as one of the key audit matters.

How our audit addressed the matter

We performed the following audit procedures in respect of the above key audit matter:

1. Obtained detailed listings of cash in banks. Sent confirmation letters to all financial institutions and reviewed special terms and agreements in order to ensure the existence and rights and obligations of cash in banks.
2. Obtained an understanding of procedures for preparation and review of bank reconciliations, including validating unusual reconciling items.
3. Obtained an understanding of the usage of the bank accounts as well as sampled and validated significant cash transactions to ensure they are operational in nature and there are no significant and unusual transactions.

Evaluation of inventories

Description

Refer to Note 4(14) of the consolidated financial statements for inventory evaluation policies, Note 5(2) for uncertainty of accounting estimates and assumptions of inventory evaluation and Note 6(6) for the details of inventories.

The Group is primarily engaged in researching, developing, manufacturing, selling of various integrated circuits and related application software. Inventories are stated at the lower of cost and net realizable value. Due to the balances of inventories are significant to the financial statements and the rapid technological changes in the industry, there is a higher risk of decline in market value and obsolescence of inventories. Thus, we considered the evaluation of inventories as one of the key audit matters.

How our audit addressed the matter

We performed the following audit procedures in respect of the above key audit matter:

1. Obtained an understanding of accounting policies on the provision of allowance for inventory valuation losses and assessed the reasonableness.
2. Validated the accuracy of inventory aging report, as well as sampled and confirmed the consistency of quantities and amounts with detailed inventory listing, verified dates of movements with supporting documents and ensured the proper categorization of inventory aging report.
3. Evaluated and confirmed the reasonableness of net realizable value for inventories through validating respective supporting documents.

Other matter – Reference to audits of other independent accountants

We did not audit the financial statements of certain consolidated subsidiaries and investments accounted for under equity method. Those financial statements were audited by other independent accountants, whose reports thereon have been furnished to us, and our opinion expressed herein, insofar as it relates to the amounts included in the financial statements and the information on the consolidated subsidiaries and investments accounted for under equity method were based solely on the reports of other independent accountants. Total assets (including investments accounted for under equity method amounted to NT$185,972 thousand and NT$261,628 thousand) of those consolidated subsidiaries amounted to NT$5,971,097 thousand and NT$6,469,495 thousand, constituting 8.13% and 11.11% of the consolidated total assets as of December 31, 2019 and 2018, respectively, and total operating revenues were both NT$0 thousand, both constituting 0% of the consolidated total operating revenues for the years then ended. Furthermore, according to the reports of other independent accountants, comprehensive losses of those investments accounted for under equity method amounted to NT$19,443 thousand and NT$41,330 thousand, constituting 0.32% and 0.82% of comprehensive incomes for the years then ended, respectively.

Other matter – Parent company only financial reports

We have audited and expressed an unqualified opinion with other matter section on the parent company only financial statements of Realtek Semiconductor Corporation as at and for the years ended December 31, 2019 and 2018.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers" and the International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the Financial Supervisory Commission, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the Audit Committee, are responsible for overseeing the Group's financial reporting process.

Independent accountant's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ROC GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ROC GAAS, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report. However, future events or conditions may cause the Group to cease to continue as a going concern.
5. Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Lin, Yu-Kuan	Tsang, Kwoh-Wah

For and on behalf of PricewaterhouseCoopers, Taiwan

March 20, 2020

The accompanying consolidated financial statements are not intended to present the financial position and results of operations and cash flows in accordance with accounting principles generally accepted in countries and jurisdictions other than the Republic of China. The standards, procedures and practices in the Republic of China governing the audit of such financial statements may differ from those generally accepted in countries and jurisdictions other than the Republic of China. Accordingly, the accompanying consolidated financial statements and report of independent accountants are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice.

As the financial statements are the responsibility of the management, PricewaterhouseCoopers cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Assets	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
	Current assets					
1100	Cash and cash equivalents	6(1)	$ 5,727,911	8	$ 4,309,651	7
1110	Financial assets at fair value through profit or loss - current	6(2)	74,012	-	1,321,103	2
1136	Financial assets at amortised cost - current	6(4) and 8	39,558,054	54	31,286,209	54
1170	Accounts receivable, net	6(5)	8,254,011	11	5,647,722	10
1180	Accounts receivable, net - related parties	6(5) and 7	2,196,717	3	1,772,071	3
1200	Other receivables		768,699	1	657,190	1
130X	Inventories, net	6(6)	7,391,535	10	5,862,005	10
1410	Prepayments		318,652	1	297,327	1
11XX	**Total current assets**		64,289,591	88	51,153,278	88
	Non-current assets					
1517	Financial assets at fair value through other comprehensive income - non-current	6(3)	1,859,478	2	1,651,072	3
1535	Financial assets at amortised cost - non-current	6(4) and 8	69,477	-	-	-
1550	Investments accounted for under equity method	6(7)	185,972	-	261,628	-
1600	Property, plant and equipment	6(8)	3,446,162	5	3,316,578	6
1755	Right-of-use assets	6(9)	1,403,245	2	-	-
1760	Investment property	6(10)	49,136	-	54,868	-
1780	Intangible assets	6(11)	1,952,960	3	1,686,249	3
1840	Deferred income tax assets	6(27)	114,163	-	78,472	-
1900	Other non-current assets		61,646	-	50,169	-
15XX	**Total non-current assets**		9,142,239	12	7,099,036	12
1XXX	**Total assets**		$ 73,431,830	100	$ 58,252,314	100

(Continued)

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Liabilities and Equity	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
	Current liabilities					
2100	Short-term borrowings	6(13)	$ 18,966,042	26	$ 14,526,311	25
2130	Contract liabilities - current	6(21)	104,974	-	148,696	-
2150	Notes payable		3,276	-	8,657	-
2170	Accounts payable		7,441,724	10	5,635,986	10
2180	Accounts payable - related parties	7	329,514	1	249,869	1
2200	Other payables	6(14)	10,746,168	15	7,542,208	13
2220	Other payables - related parties	7	87,293	-	69,047	-
2230	Current income tax liabilities		828,790	1	601,614	1
2280	Lease liabilities - current		84,328	-	-	-
2300	Other current liabilities	6(21)	5,378,078	7	3,719,866	6
21XX	**Total current liabilities**		43,970,187	60	32,502,254	56
	Non-current liabilities					
2550	Provisions - non-current	6(16)	1,075,809	2	999,868	2
2570	Deferred income tax liabilities	6(27)	51,723	-	22,310	-
2580	Lease liabilities - non-current		1,028,347	1	-	-
2600	Other non-current liabilities		77,080	-	80,983	-
25XX	**Total non-current liabilities**		2,232,959	3	1,103,161	2
2XXX	**Total liabilities**		46,203,146	63	33,605,415	58
	Equity					
	Share capital	6(17)				
3110	Common shares		5,080,955	7	5,080,955	9
	Capital surplus	6(18)				
3200	Capital surplus		2,736,854	3	3,236,659	5
	Retained earnings	6(19)				
3310	Legal reserve		4,902,176	7	4,467,099	8
3320	Special reserve		-	-	600,443	1
3350	Undistributed earnings		14,716,036	20	10,850,172	19
	Other equity	6(20)				
3400	Other equity interest		(217,036)	-	401,964	-
31XX	**Equity attributable to holders of the parent company**		27,218,985	37	24,637,292	42
36XX	**Non-controlling interest**		9,699	-	9,607	-
3XXX	**Total equity**		27,228,684	37	24,646,899	42
3X2X	**Total liabilities and equity**		$ 73,431,830	100	$ 58,252,314	100

The accompanying notes are an integral part of these consolidated financial statements.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except earnings per share amounts)

	Items	Notes	2019 AMOUNT	2019 %	2018 AMOUNT	2018 %
4000	**Operating revenue**	6(21) and 7	$ 60,744,006	100	$ 45,805,746	100
5000	**Operating costs**	6(6) and 7	(34,160,690)	(56)	(25,344,876)	(55)
5950	**Gross profit**		26,583,316	44	20,460,870	45
	Operating expenses	6(25)(26) and 7				
6100	Selling expenses		(2,996,402)	(5)	(2,464,470)	(6)
6200	General and administrative expenses		(1,699,212)	(3)	(1,263,689)	(3)
6300	Research and development expenses		(15,535,505)	(26)	(12,969,972)	(28)
6450	Expected credit gains (losses)	12(2)	(21,332)	-	1,721	-
6000	**Total operating expenses**		(20,252,451)	(34)	(16,696,410)	(37)
6900	**Operating income**		6,330,865	10	3,764,460	8
	Non-operating income and expenses					
7010	Other income	6(22)	1,412,779	2	1,134,971	2
7020	Other gains and losses	6(23)	(323,685)	-	(58,536)	-
7050	Finance costs	6(24)	(160,254)	-	(140,387)	-
7060	Share of loss of associates and joint ventures accounted for under equity method	6(7)	(23,833)	-	(43,307)	-
7000	**Total non-operating income and expenses**		905,007	2	892,741	2
7900	**Profit before income tax, net**		7,235,872	12	4,657,201	10
7950	Income tax expense	6(27)	(445,497)	(1)	(306,420)	(1)
8200	**Net income for the year**		$ 6,790,375	11	$ 4,350,781	9

(Continued)

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except earnings per share amounts)

	Items	Notes	2019 AMOUNT	2019 %	2018 AMOUNT	2018 %
	Other comprehensive income, net	6(20)				
	Components of other comprehensive income that will not be reclassified to profit or loss					
8311	Losses on remeasurements of defined benefit plans		$ -	-	($ 75,809)	-
8316	Unrealised gains (losses) from investments in equity instruments measured at fair value through other comprehensive income		227,352	-	(165,659)	-
8320	Share of other comprehensive income of associates and joint ventures accounted for under equity method, components of other comprehensive income that will not be reclassified to profit or loss		4,390	-	1,977	-
8310	**Total components of other comprehensive income that will not be reclassified to profit or loss**		231,742	-	(239,491)	-
	Components of other comprehensive income that will be reclassified to profit or loss					
8361	Cumulative translation differences of foreign operation		(891,954)	(1)	942,974	2
8360	**Total components of other comprehensive (loss) income that will be reclassified to profit or loss**		(891,954)	(1)	942,974	2
8300	**Other comprehensive (loss) income, net**		($ 660,212)	(1)	$ 703,483	2
8500	**Total comprehensive income for the year**		$ 6,130,163	10	$ 5,054,264	11
	Profit attributable to:					
8610	Equity holders of the parent company		$ 6,790,283	11	$ 4,350,768	9
8620	Non-controlling interest		92	-	13	-
	Profit for the year		$ 6,790,375	11	$ 4,350,781	9
	Comprehensive income					
8710	Equity holders of the parent company		$ 6,130,071	10	$ 5,054,251	11
8720	Non-controlling interest		92	-	13	-
	Total comprehensive income for the year		$ 6,130,163	10	$ 5,054,264	11
	Earnings per share (in dollars)					
9750	**Basic earnings per share**	6(28)	$	13.36	$	8.57
9850	**Diluted earnings per share**	6(28)	$	13.13	$	8.40

The accompanying notes are an integral part of these consolidated financial statements.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except as otherwise indicated)

		Equity attributable to owners of the parent										
				Retained Earnings								
	Notes	Common shares	Capital surplus	Legal reserve	Special reserve	Undistributed earnings	Financial statements translation differences of foreign operations	Unrealised gains (losses) from financial assets measured at fair value through other comprehensive income	Unrealized gain on available-for-sale financial assets	Total	Non-controlling interest	Total equity
2018												
Balance at January 1, 2018		$ 5,065,062	$ 3,558,856	$ 4,127,884	$ -	$ 9,698,159	($ 813,163)	$ -	$ 212,720	$ 21,849,518	$ 9,594	$ 21,859,112
Modified retrospective approach adjustment	6(20)	-	-	-	-	103,142	-	435,835	(212,720)	326,257	-	326,257
Balance at 1 January after adjustments		5,065,062	3,558,856	4,127,884	-	9,801,301	(813,163)	435,835	-	22,175,775	9,594	22,185,369
Net income for the year		-	-	-	-	4,350,768	-	-	-	4,350,768	13	4,350,781
Other comprehensive income (loss) for the year	6(20)	-	-	-	-	(75,809)	942,974	(163,682)	-	703,483	-	703,483
Total comprehensive income (loss)		-	-	-	-	4,274,959	942,974	(163,682)	-	5,054,251	13	5,054,264
Distribution of 2017 earnings	6(19)											
Legal reserve		-	-	339,215	-	(339,215)	-	-	-	-	-	-
Special reserve		-	-	-	600,443	(600,443)	-	-	-	-	-	-
Cash dividends		-	-	-	-	(2,286,430)	-	-	-	(2,286,430)	-	(2,286,430)
Employees' compensation transferred to commom stock	6(18)	15,893	163,692	-	-	-	-	-	-	179,585	-	179,585
Cash from capital surplus	6(18)	-	(508,095)	-	-	-	-	-	-	(508,095)	-	(508,095)
Changes in equity of associates accounted for under equity method	6(18)	-	22,005	-	-	-	-	-	-	22,005	-	22,005
Cash dividends returned	6(18)	-	201	-	-	-	-	-	-	201	-	201
Balance at December 31, 2018		$ 5,080,955	$ 3,236,659	$ 4,467,099	$ 600,443	$ 10,850,172	$ 129,811	$ 272,153	$ -	$ 24,637,292	$ 9,607	$ 24,646,899
2019												
Balance at January 1, 2019		$ 5,080,955	$ 3,236,659	$ 4,467,099	$ 600,443	$ 10,850,172	$ 129,811	$ 272,153	$ -	$ 24,637,292	$ 9,607	$ 24,646,899
Net income for the year		-	-	-	-	6,790,283	-	-	-	6,790,283	92	6,790,375
Other comprehensive income (loss) for the year	6(20)	-	-	-	-	-	(891,954)	231,742	-	(660,212)	-	(660,212)
Total comprehensive income (loss)		-	-	-	-	6,790,283	(891,954)	231,742	-	6,130,071	92	6,130,163
Distribution of 2018 earnings	6(19)											
Legal reserve		-	-	435,077	-	(435,077)	-	-	-	-	-	-
Special reserve		-	-	-	(600,443)	600,443	-	-	-	-	-	-
Cash dividends		-	-	-	-	(3,048,573)	-	-	-	(3,048,573)	-	(3,048,573)
Cash from capital surplus	6(18)	-	(508,095)	-	-	-	-	-	-	(508,095)	-	(508,095)
Changes in equity of associates accounted for under equity method	6(18)	-	8,064	-	-	-	-	-	-	8,064	-	8,064
Disposal of investments in equity instruments measured at fair value through other comprehensive income	6(20)	-	-	-	-	(41,212)	-	41,212	-	-	-	-
Cash dividends returned	6(18)	-	226	-	-	-	-	-	-	226	-	226
Balance at December 31, 2019		$ 5,080,955	$ 2,736,854	$ 4,902,176	$ -	$ 14,716,036	($ 762,143)	$ 545,107	$ -	$ 27,218,985	$ 9,699	$ 27,228,684

The accompanying notes are an integral part of these consolidated financial statements.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Notes	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit before tax		$ 7,235,872	$ 4,657,201
Adjustments			
Adjustments to reconcile profit (loss)			
Depreciation	6(25)	700,806	544,084
Amortization	6(11)(25)	1,019,785	994,852
Expected credit losses (gains)	12(2)	21,332	(1,721)
Interest expense	6(24)	160,254	140,387
Interest income	6(22)	(1,277,211)	(989,290)
Dividend income	6(22)	(30,150)	(32,942)
(Gain) loss on financial assets at fair value through profit or loss	6(23)	(5,764)	19,240
Share of loss of associates and joint ventures accounted for under equity method	6(7)	23,833	43,307
Loss (gain) on disposal of property, plant and equipment	6(23)	157	(133)
Impairment loss	6(23)	189,483	-
Other intangible assets transferred to expenses		526	7,698
Changes in operating assets and liabilities			
Changes in operating assets			
Financial assets at fair value through profit or loss - current		1,241,327	(583,466)
Accounts receivable, net		(2,627,248)	23,602
Accounts receivable, net - related parties		(425,122)	(495,111)
Other receivables		24,884	(25,846)
Inventories		(1,529,530)	(349,516)
Prepayments		(21,325)	(27,418)
Changes in operating liabilities			
Contract liabilities - current		(43,722)	45,527
Notes payable		(5,381)	26
Accounts payable		1,805,738	1,058,645
Accounts payable - related parties		79,645	(41,886)
Other payables		3,149,058	1,514,253
Other payables - related parties		18,246	29,123
Advance receipts		-	6,203
Other current liabilities		1,671,139	939,774
Provisions - non-current		102,181	98,438
Accrued pension obligations		(2,466)	(2,507)

(Continued)

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Notes	2019	2018
Cash inflow generated from operations		$ 11,476,347	$ 7,572,524
Receipt of interest		1,140,818	793,055
Receipt of dividend		30,150	32,942
Interest paid		(162,681)	(138,521)
Income tax paid		(233,349)	(66,250)
Net cash flows from operating activities		12,251,285	8,193,750
CASH FLOWS FROM INVESTING ACTIVITIES			
Acquisition of financial assets at amortised cost		(44,715,715)	(6,946,509)
Proceeds from disposal of financial assets at amortised cost		35,512,063	30,254
Acquisition of financial assets at fair value through other comprehensive income		-	(28,000)
Proceeds from disposal of financial assets at fair value through other comprehensive income		939	-
Proceeds from capital reduction of investee accounted for under equity method	6(7)	17,908	-
Acquisition of property, plant and equipment	6(29)	(747,026)	(629,854)
Proceeds from disposal of property, plant and equipment		92	276
Acquisition of intangible assets	6(29)	(1,403,279)	(592,220)
Acquisition of right-of-use assets		(286,276)	-
Increase in refundable deposits		(3,811)	(11,072)
(Increase) decrease in other non-current assets		(7,666)	1,924
Net cash flows used in investing activities		(11,632,771)	(8,175,201)
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase in short-term borrowings		148,524,088	146,563,258
Decrease in short-term borrowings		(144,084,357)	(150,089,571)
Repayment of principal portion of lease liabilities	6(30)	(76,732)	-
Guarantee deposits returned	6(30)	(1,437)	(278)
Cash dividends paid	6(19)	(3,556,668)	(2,794,525)
Cash dividends returned		226	201
Net cash flows from (used in) financing activities		805,120	(6,320,915)
Effect of exchange rate		(5,374)	1,017,661
Net increase (decrease) in cash and cash equivalents		1,418,260	(5,284,705)
Cash and cash equivalents at beginning of year		4,309,651	9,594,356
Cash and cash equivalents at end of year		$ 5,727,911	$ 4,309,651

The accompanying notes are an integral part of these consolidated financial statements.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except as otherwise indicated)

1. HISTORY AND ORGANISATION

Realtek Semiconductor Corporation (the "Company") was incorporated as a company limited by shares on October 21, 1987 and commenced commercial operations in March 1988. The Company was based in Hsinchu Science-Based Industrial Park since October 28, 1989. The Company and its subsidiaries (collectively referred herein as the "Group") are engaged in the research, development, design, testing, and sales of ICs and application softwares for these products.

2. THE DATE OF AUTHORISATION FOR ISSUANCE OF THE CONSOLIDATED FINANCIAL STATEMENTS AND PROCEDURES FOR AUTHORISATION

These consolidated financial statements were authorised for issuance by the Board of Directors on March 20, 2020.

3. APPLICATION OF NEW STANDARDS,AMENDMENTS AND INTERPRETATIONS

(1) Effect of the adoption of new issuances of or amendments to International Financial Reporting Standards ("IFRSs") as endorsed by the Financial Supervisory Commission ("FSC")

New standards, interpretations and amendments endorsed by the FSC effective from 2019 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 9, 'Prepayment features with negative compensation'	January 1, 2019
IFRS 16, 'Leases'	January 1, 2019
Amendments to IAS 19, 'Plan amendment, curtailment or settlement'	January 1, 2019
Amendments to IAS 28, 'Long-term interests in associates and joint ventures'	January 1, 2019
IFRIC 23, 'Uncertainty over income tax treatments'	January 1, 2019
Annual improvements to IFRSs 2015-2017 cycle	January 1, 2019

Except for the following, the above standards and interpretations have no significant impact to the Group's financial condition and financial performance based on the Group's assessment.

IFRS 16, ‘Leases’

A. IFRS 16, ‘Leases’, replaces IAS 17, ‘Leases’ and related interpretations and SICs. The standard requires lessees to recognize a ‘right-of-use asset’ and a lease liability (except for those leases with terms of 12 months or less and leases of low-value assets). The accounting stays the same for lessors, which is to classify their leases as either finance leases or operating leases and account for those two types of leases differently. IFRS 16 only requires enhanced disclosures to be provided by lessors.

B. The Group has elected to apply IFRS 16 by not restating the comparative information (referred herein as the ‘modified retrospective approach’) when applying “IFRSs” effective in 2019 as endorsed by the FSC. Accordingly, the Group increased ‘right-of-use asset’ by $1,048,079 and increased ‘lease liability’ by $1,048,079 with respect to the lease contracts of lessees on January 1, 2019.

C. The Group has used the following practical expedients permitted by the standard at the date of initial application of IFRS 16:

(a)The use of a single discount rate to a portfolio of leases with reasonably similar characteristics.

(b)The exclusion of initial direct costs for the measurement of ‘right-of-use asset’.

D. The Group calculated the present value of lease liabilities by using the incremental borrowing interest rate range from 0.97% to 6.5%.

E. The Group recognized lease liabilities which had previously been classified as ‘operating leases’ under the principles of IAS 17, ‘Leases’. The reconciliation between operating lease commitments under IAS 17 measured at the present value of the remaining lease payments, discounted using the lessee’s incremental borrowing rate and lease liabilities recognized as of January 1, 2019 is as follows:

Operating lease commitments disclosed by applying IAS 17 as at December 31, 2018	$ 258,087
Add: Adjustments as a result of a different treatment of extension and termination options	1,108,891
Total lease contracts amount recognised as lease liabilities by applying IFRS 16 on January 1, 2019	1,366,978
Incremental borrowing interest rate at the date of initial application	0.97%~6.5%
Lease liabilities recognised as at January 1, 2019 by applying IFRS 16	$ 1,048,079

(2) Effect of new issuances of or amendments to IFRSs as endorsed by the FSC but not yet adopted by the Group

New standards, interpretations and amendments endorsed by the FSC effective from 2020 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendment to IAS 1 and IAS 8, 'Disclosure Initiative-Definition of Material'	January 1, 2020
Amendments to IFRS 3, 'Definition of a business'	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS 7, 'Interest rate benchmark reform'	January 1, 2020

The above standards and interpretations have no significant impact to the Group's financial condition and financial performance based on the Group's assessment.

(3) IFRSs issued by IASB but not yet endorsed by the FSC

New standards, interpretations and amendments issued by IASB but not yet included in the IFRSs as endorsed by the FSC are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 10 and IAS 28, 'Sale or contribution of assets between an investor and its associate or joint venture'	To be determined by International Accounting Standards Board
IFRS 17, 'Insurance contracts'	January 1, 2021
Amendments to IAS 1, 'Classification of liabilities as current or non-current'	January 1, 2022

The above standards and interpretations have no significant impact to the Group's financial condition and financial performance based on the Group's assessment.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

(1) Compliance statement

The consolidated financial statements of the Group have been prepared in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers", International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively referred herein as the "IFRSs").

(2) Basis of preparation

A. Except for the following items, the consolidated financial statements have been prepared under the historical cost convention:

(a) Financial assets (including derivative instruments) at fair value through profit or loss.

(b) Financial assets at fair value through other comprehensive income.

(c) Defined benefit liabilities recognized based on the net amount of pension fund assets less present value of defined benefit obligation.

B. The preparation of financial statements in conformity with International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively referred herein as the "IFRSs") requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.

(3) Basis of consolidation

A. Basis for preparation of consolidated financial statements:

(a) All subsidiaries are included in the Group's consolidated financial statements. Subsidiaries are all entities (including structured entities) controlled by the Group. The Group controls an entity when the Group is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Consolidation of subsidiaries begins from the date the Group obtains control of the subsidiaries and ceases when the Group loses control of the subsidiaries.

(b) Inter-company transactions, balances and unrealised gains or losses on transactions between companies within the Group are eliminated. Accounting policies of subsidiaries have been adjusted where necessary to ensure consistency with the policies adopted by the Group.

(c) Profit or loss and each component of other comprehensive income are attributed to the owners of the parent and to the non-controlling interests. Total comprehensive income is attributed to the owners of the parent and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

(d) Changes in a parent's ownership interest in a subsidiary that do not result in the parent losing control of the subsidiary (transactions with non-controlling interests) are accounted for as equity transactions, i.e. transactions with owners in their capacity as owners. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognized directly in equity.

(e) When the Group loses control of a subsidiary, the Group remeasures any investment retained in the former subsidiary at its fair value. That fair value is regarded as the fair value on initial recognition of a financial asset or the cost on initial recognition of the associate or joint venture. Any difference between fair value and carrying amount is recognized in profit or loss. All amounts previously recognized in other comprehensive income in relation to the subsidiary are reclassified to profit or loss on the same basis as would be required if the related assets or liabilities were disposed of. That is, when the Group loses control of a subsidiary, all gains or losses previously recognized in other comprehensive income in relation to the subsidiary should be reclassified from equity to profit or loss, if such gains or losses would be reclassified

to profit or loss when the related assets or liabilities are disposed of.

B. Subsidiaries included in the consolidated financial statements:

			Ownership (%)		
Name of investor	Name of subsidiary	Main business activities	December 31, 2019	December 31, 2018	Description
Realtek Semiconductor Corporation	Leading Enterprises Limited	Investment holdings	100%	100%	
Realtek Semiconductor Corporation	Amber Universal Inc.	〃	100%	100%	
Realtek Semiconductor Corporation	Realtek Singapore Private Limited	ICs manufacturing, design, research, development, sales, and marketing	89%	89%	
Realtek Semiconductor Corporation	Bluocean Inc.	Investment holdings	100%	100%	
Realtek Semiconductor Corporation	Talent Eagle Enterprise Inc.	〃	100%	100%	
Realtek Semiconductor Corporation	Realtek Investment Singapore Private Limited	〃	100%	100%	
Realtek Semiconductor Corporation	Realsun Investment Co., Ltd.	〃	100%	100%	
Realtek Semiconductor Corporation	Hung-wei Venture Capital Co., Ltd.	〃	100%	100%	
Realtek Semiconductor Corporation	Realking Investments Limited	〃	100%	100%	
Realtek Semiconductor Corporation	Realsun Technology Corporation	ICs manufacturing, design, research, development, sales, and marketing	100%	100%	

Name of investor	Name of subsidiary	Main business activities	Ownership (%) December 31, 2019	Ownership (%) December 31, 2018	Description
Realtek Semiconductor Corporation	Bobitag Inc.	Manufacture and installation of computer equipment and wholesale, retail and related service of electronic materials and information / software	67%	67%	
Leading Enterprises Limited	Realtek Semiconductor (Japan) Corp.	ICs design,sales and consultancy	100%	100%	
Leading Enterprises Limited	Circon Universal Inc.	Investment holdings	100%	100%	
Leading Enterprises Limited	Realtek Singapore Private Limited	ICs manufacturing, design, research, development, sales, and marketing	11%	11%	
Amber Universal Inc.	Realtek Semiconductor (HK) Limited	Information services and technical support	100%	100%	
Amber Universal Inc.	Realtek Semiconductor (Shen Zhen) Corp.	R&D and technical support	100%	100%	
Empsonic Enterprises Inc.	Realsil Microelectronics Corp.	〃	100%	100%	
Realtek Singapore Private Limited	Cortina Access Inc.	R&D and information services	100%	100%	
Realtek Singapore Private Limited	Cortina Systems Taiwan Limited	R&D and technical support	100%	100%	

Name of investor	Name of subsidiary	Main business activities	Ownership (%) December 31, 2019	Ownership (%) December 31, 2018	Description
Realtek Singapore Private Limited	Cortina Network Systems Shanghai Co., Ltd.	R&D and technical support	100%	100%	
Talent Eagle Enterprise Inc.	Ubilinx Technology Inc.	R&D and information services	100%	100%	
Realtek Singapore Private Limited	Empsonic Enterprises Inc.	Investment holdings	100%	100%	
Realtek Singapore Private Limited	Realtek Viet Nam Co., Ltd.	R&D and technical support	100%	100%	
Realtek Singapore Private Limited	RayMX Microelectronics Corp.	ICs manufacturing, design, research, development, sales, and marketing	29%	29%	
Realsil Microelectronics Corp.	RayMX Microelectronics Corp.	〃	71%	71%	

C. Subsidiaries not included in the consolidated financial statements: None.

D. Adjustments for subsidiaries with different balance sheet dates: None.

E. Significant restrictions: None.

F. Subsidiaries that have non-controlling interests that are material to the Group: None.

(4) Foreign currency translation

Items included in the financial statements of each of the Group’s entities are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). The consolidated financial statements are presented in New Taiwan dollars, which is the Company’s functional and presentation currency.

A. Foreign currency transactions and balances

(a) Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions are recognized in profit or loss in the period in which they arise.

(b) Monetary assets and liabilities denominated in foreign currencies at the period end are re-translated at the exchange rates prevailing at the balance sheet date. Exchange differences arising upon re-translation at the balance sheet date are recognized in profit or loss.

(c) Non-monetary assets and liabilities denominated in foreign currencies held at fair value through profit or loss are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognized in profit or loss. Non-monetary assets and liabilities denominated in foreign currencies held at fair value through other comprehensive income are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognized in other comprehensive income. However, non-monetary assets and liabilities denominated in foreign currencies that are not measured at fair value are translated using the historical exchange rates at the dates of the initial transactions.

(d) All other foreign exchange gains and losses based on the nature of those transactions are presented in the statement of comprehensive income within 'other gains and losses'.

B. Translation of foreign operations

(a) The operating results and financial position of all the group entities, associates and joint arrangements that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

i. Assets and liabilities for each balance sheet presented are translated at the closing exchange rate at the date of that balance sheet;

ii. Income and expenses for each statement of comprehensive income are translated at average exchange rates of that period; and

iii. All resulting exchange differences are recognized in other comprehensive income.

(b) When the foreign operation partially disposed of or sold is an associate, exchange differences that were recorded in other comprehensive income are proportionately reclassified to profit or loss as part of the gain or loss on sale. In addition, even when the Group retains partial interest in the former foreign associate after losing significant influence over the former foreign associate, such transactions should be accounted for as disposal of all interest in these foreign operations.

(c) Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing exchange rates at the balance sheet date.

(5) <u>Classification of current and non-current items</u>

A. Assets that meet one of the following criteria are classified as current assets; otherwise they are classified as non-current assets:

(a) Assets arising from operating activities that are expected to be realised, or are intended to be sold or consumed within the normal operating cycle;

(b) Assets held mainly for trading purposes;

(c) Assets that are expected to be realised within twelve months from the balance sheet date;

(d) Cash and cash equivalents, excluding restricted cash and cash equivalents and those that are to be exchanged or used to settle liabilities more than twelve months after the balance sheet date.

Otherwise the Group classified as non-current assets.

B. Liabilities that meet one of the following criteria are classified as current liabilities; otherwise they are classified as non-current liabilities:

(a) Liabilities that are expected to be settled within the normal operating cycle;

(b) Liabilities arising mainly from trading activities;

(c) Liabilities that are to be settled within twelve months from the balance sheet date;

(d) Liabilities for which the repayment date cannot be extended unconditionally to more than twelve months after the balance sheet date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

Otherwise the Group classified as non-current liabilities.

(6) Cash equivalents

Cash equivalents refer to short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. Time deposits that meet the definition above and are held for the purpose of meeting short-term cash commitments in operations are classified as cash equivalents.

(7) Financial assets at fair value through profit or loss

A. Financial assets at fair value through profit or loss are financial assets that are not measured at amortised cost or fair value through other comprehensive income. Financial assets at amortised cost or fair value through other comprehensive income are designated as at fair value through profit or loss at initial recognition when they eliminate or significantly reduce a measurement or recognition inconsistency.

B. On a regular way purchase or sale basis, financial assets at fair value through profit or loss are recognized and derecognized using trade date accounting.

C. At initial recognition, the Group measures the financial assets at fair value and recognizes the transaction costs in profit or loss. The Group subsequently measures the financial assets at fair value, and recognizes the gain or loss in profit or loss.

D. The Group recognizes the dividend income when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

(8) Financial assets at fair value through other comprehensive income

A. Financial assets at fair value through other comprehensive income comprise equity securities which are not held for trading, and for which the Group has made an irrevocable election at initial recognition to recognize changes in fair value in other comprehensive income.

B. On a regular way purchase or sale basis, financial assets at fair value through other comprehensive income are recognized and derecognized using trade date accounting.

C. At initial recognition, the Group measures the financial assets at fair value plus transaction costs. The Group subsequently measures the financial assets at fair value:

The changes in fair value of equity investments that were recognized in other comprehensive income are reclassified to retained earnings and are not reclassified to profit or loss following the derecognition of the investment. Dividends are recognized as revenue when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Group and the amount of the dividend can be measured reliably.

(9) Financial assets at amortised cost

The Group's time deposits which do not fall under cash equivalents are those with a short maturity period and are measured at initial investment amount as the effect of discounting is immaterial.

(10) Accounts receivable

A. Accounts receivable entitle the Group a legal right to receive consideration in exchange for transferred goods or rendered services.

B. The short-term accounts and notes receivable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

(11) Impairment of financial assets

For financial assets at amortised cost, at each reporting date, the Group recognizes the impairment provision for 12 months expected credit losses if there has not been a significant increase in credit risk since initial recognition or recognizes the impairment provision for the lifetime expected credit losses (ECLs) if such credit risk has increased since initial recognition after taking into consideration all reasonable and verifiable information that includes forecasts. On the other hand, for accounts receivable that do not contain a significant financing component, the Group recognizes the impairment provision for lifetime ECLs.

(12) Derecognition of financial assets

The Group derecognizes a financial asset when the contractual rights to receive the cash flows from the financial asset expire.

(13) Operating leases (lessor)

Lease income from an operating lease (net of any incentives given to the lessee) is recognized in profit or loss on a straight-line basis over the lease term.

(14) Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted-average method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (allocated based on normal operating capacity). It excludes borrowing costs. The item by item approach is used in applying the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and applicable variable selling expenses.

(15) Investments accounted for under equity method / associates

A. Associates are all entities over which the Group has significant influence but not control. In general, it is presumed that the investor has significant influence, if an investor holds, directly or indirectly 20 percent or more of the voting power of the investee. Investments in associates are accounted for under equity method and are initially recognized at cost.

B. The Group’s share of its associates’ post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income. When the Group’s share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate.

C. When changes in an associate’s equity do not arise from profit or loss or other comprehensive income of the associate and such changes do not affect the Group’s ownership percentage of the associate, the Group recognizes change in ownership interests in the associate in ‘capital surplus’ in proportion to its ownership.

D. Unrealised gains on transactions between the Group and its associates are eliminated to the extent of the Group’s interest in the associates. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been adjusted where necessary to ensure consistency with the policies adopted by the Group.

E. In the case that an associate issues new shares and the Group does not subscribe or acquire new shares proportionately, which results in a change in the Group’s ownership percentage of the associate but maintains significant influence on the associate, then ‘capital surplus’ and ‘investments accounted for under equity method’ shall be adjusted for the increase or decrease of its share of equity interest. If the above condition causes a decrease in the Group’s ownership percentage of the associate, in addition to the above adjustment, the amounts previously recognized in other comprehensive income in relation to the associate are reclassified to profit or loss proportionately on the same basis as would be required if the relevant assets or liabilities were disposed of.

F. Upon loss of significant influence over an associate, the Group remeasures any investment retained in the former associate at its fair value. Any difference between fair value and carrying amount is recognized in profit or loss.

G. When the Group disposes its investment in an associate and loses significant influence over this associate, the amounts previously recognized in other comprehensive income in relation to the associate, are reclassified to profit or loss, on the same basis as would be required if the relevant assets or liabilities were disposed of. If it retains significant influence over this associate, the amounts previously recognized in other comprehensive income in relation to the associate are reclassified to profit or loss proportionately in accordance with the aforementioned approach.

(16) Property, plant and equipment

A. Property, plant and equipment are initially recorded at cost. Borrowing costs incurred during the construction period are capitalised.

B. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

C. Other property, plant and equipment apply cost model and are depreciated using the straight-line method to allocate their cost over their estimated useful lives. Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item must be depreciated separately.

D. The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each financial year-end. If expectations for the assets' residual values and useful lives differ from previous estimates or the patterns of consumption of the assets' future economic benefits embodied in the assets have changed significantly, any change is accounted for as a change in estimate under IAS 8, 'Accounting Policies, Changes in Accounting Estimates and Errors', from the date of the change. The estimated useful lives of the fixed assets are as follows: buildings - 10~55 years and other fixed assets - 3~5 years.

(17) Leasing arrangements (lessee)－right-of-use assets/ lease liabilities

Effective 2019

A. Leases are recognized as a right-of-use asset and a corresponding lease liability at the date at which the leased asset is available for use by the Group.

B. Lease liabilities include the net present value of the remaining lease payments at the commencement date, discounted using the incremental borrowing interest rate. Fixed payments, less any lease incentives receivable.

The Group subsequently measures the lease liability at amortised cost using the interest method and recognizes interest expense over the lease term. The lease liability is remeasured and the amount of remeasurement is recognized as an adjustment to the right-of-use asset when there are changes in the lease term or lease payments do not arise from contract modifications.

C. At the commencement date, the right-of-use asset is stated at cost comprising the following:

(a) The amount of the initial measurement of lease liability; and

(b) Any lease payments made at or before the commencement date.

The right-of-use asset is measured subsequently using the cost model and is depreciated from the commencement date to the earlier of the end of the asset's useful life or the end of the lease term. When the lease liability is remeasured, the amount of remeasurement is recognized as an adjustment to the right-of-use asset.

(18) Operating leases (lessee)

Applicable for 2018

Payments made under an operating lease (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the lease term.

(19) Investment property

An investment property is stated initially at its cost and measured subsequently using the cost model. Except for land, investment property is depreciated on a straight-line basis over its estimated useful life of 20 years.

(20) Intangible assets

A. Computer software

Computer software is stated at cost and amortised on a straight-line basis over its estimated useful life of 1 to 5 years.

B. Goodwill

Goodwill arises in a business combination accounted for by applying the acquisition method.

C. Other intangible assets

Separately acquired intangible assets with a finite useful life are stated at cost, net of accumulated amortisation and accumulated impairment. Intangible assets acquired in a business combination are recognized at fair value at acquisition date. The amortisation amounts of separately and consolidated acquired intangible assets were amortised on a straight-line basis over their estimated useful lives of 2-5 years.

(21) Impairment of non-financial assets

A. The Group assesses at each balance sheet date the recoverable amounts of those assets where there is an indication that they are impaired. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. When the circumstances or reasons for recognizing impairment loss for an asset in prior years no longer exist or diminish, the impairment loss is reversed. The increased carrying amount due to reversal should not be more than what the depreciated or amortised historical cost would have been if the impairment had not been recognized.

B. The recoverable amounts of goodwill is evaluated periodically. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. Impairment loss of goodwill previously recognized in profit or loss shall not be reversed in the following years.

(22) Borrowings

Borrowings comprise short-term bank borrowings. Borrowings are recognized initially at fair value, net of transaction costs incurred.

(23) Notes and accounts payable

A. Accounts payable are liabilities for purchases of raw materials, goods or services and notes payable are those resulting from operating and non-operating activities.

B. The short-term notes and accounts payable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

(24) Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability specified in the contract is discharged or cancelled or expires.

(25) Provisions

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, and it is probable that an outflow of economic resources will be required to settle the obligation and the amount of the obligation can be reliably estimated. Provisions are measured at the present value of the expenditures expected to be required to settle the obligation on the balance sheet date.

(26) Employee benefits

A. Short-term employee benefits

Short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in respect of service rendered by employees in a period and should be recognized as expense in that period when the employees render service.

B. Pensions

(a) Defined contribution plan

For defined contribution plans, the contributions are recognized as pension expense when they are due on an accrual basis. Prepaid contributions are recognized as an asset to the extent of a cash refund or a reduction in the future payments.

(b) Defined benefit plan

i. Net obligation under a defined benefit plan is defined as the present value of an amount of pension benefits that employees will receive on retirement for their services with the Company in current period or prior periods. The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. The net defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The rate used to discount is determined by using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension

liability; when there is no deep market in high-quality corporate bonds, the Company uses interest rates of government bonds (at the balance sheet date) instead.

ii. Remeasurements arising on defined benefit plans are recognized in other comprehensive income in the period in which they arise and are recorded as retained earnings.

C. Employees' compensation and directors' remuneration

Employees' compensation and directors' and remuneration are recognized as expense and liability, provided that such recognition is required under legal or constructive obligation and those amounts can be reliably estimated. Any difference between the resolved amounts and the subsequently actual distributed amounts is accounted for as changes in estimates. If employee compensation is distributed by shares, the Group calculates the number of shares based on the closing price at the previous day of the Board meeting resolution.

(27) Income tax

A. The tax expense for the period comprises current and deferred tax. Tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or items recognized directly in equity, in which cases the tax is recognized in other comprehensive income or equity.

B. The current income tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in accordance with applicable tax regulations. It establishes provisions where appropriate based on the amounts expected to be paid to the tax authorities. An additional tax is levied on the unappropriated retained earnings and is recorded as income tax expense in the year the stockholders resolve to retain the earnings.

C. Deferred tax is recognized, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated balance sheet. However, the deferred tax is not accounted for if it arises from initial recognition of goodwill or of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit nor loss. Deferred tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

D. Deferred tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. At each balance sheet date, unrecognized and recognized deferred tax assets are reassessed.

E. A deferred tax asset shall be recognized for the carryforward of unused tax credits resulting from research and development expenditures to the extent that it is possible that future taxable profit will be available against which the unused tax credits can be utilised.

(28) Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

(29) Dividends

Dividends are recorded in the Company's financial statements in the period in which they are resolved by the Company's shareholders. Cash dividends are recorded as liabilities; stock dividends are recorded as stock dividends to be distributed and are reclassified to ordinary shares on the effective date of new shares issuance.

(30) Revenue recognition

A. Sales of goods

(a) The Group manufactures and sells various integrated circuit related products. Sales are recognized when control of the products has transferred, being when the products are delivered to the customers, and there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred to the wholesaler, and either the wholesaler has accepted the products in accordance with the sales contract, or the Group has objective evidence that all criteria for acceptance have been satisfied.

(b) Revenue from these sales is recognized based on the price specified in the contract. A refund liability is recognized for expected sales discounts and allowances payable to customers in relation to sales made until the end of the reporting period. As the time interval between the transfer of committed goods or service and the payment of customer does not exceed one year, the Group does not adjust the transaction price to reflect the time value of money.

(c) A receivable is recognized when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

B. Services revenue

Revenue from design, royalty and technical services is recognized after completing the services in which the services are rendered.

(31) Operating segments

Operating segments are reported in a manner consistent with the internal reporting provided to the Chief Operating Decision-Maker. The Group's Chief Operating Decision-Maker is responsible for allocating resources and assessing performance of the operating segments.

5. CRITICAL ACCOUNTING JUDGEMENTS, ESTIMATES AND KEY SOURCES OF ASSUMPTION UNCERTAINTY

The preparation of these consolidated financial statements requires management to make critical judgements in applying the Group's accounting policies and make critical assumptions and estimates concerning future events. Assumptions and estimates may differ from the actual results and are continually evaluated and adjusted based on historical experience and other factors. Such assumptions and estimates have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year; and the related information is addressed below:

(1) Critical judgements in applying the Group's accounting policies

None.

(2) Critical accounting estimates and assumptions

Evaluation of inventories

As inventories are stated at the lower of cost and net realisable value, the Group must determine the net realisable value of inventories on balance sheet date using judgements and estimates. Due to the rapid technology innovation, the Group evaluates the amounts of normal inventory consumption, obsolete inventories or inventories without market selling value on balance sheet date, and writes down the cost of inventories to the net realisable value. Such an evaluation of inventories is principally based on the demand for the products within the specified period in the future. Therefore, there might be material changes to the evaluation.

As of December 31, 2019, the carrying amount of inventories was $7,391,535.

6. DETAILS OF SIGNIFICANT ACCOUNTS

(1) Cash and cash equivalents

	December 31, 2019	December 31, 2018
Cash on hand and revolving funds	$ 841	$ 1,819
Checking accounts and demand deposits	4,221,046	3,248,619
Time deposits	1,506,024	1,059,213
Total	$ 5,727,911	$ 4,309,651

The Group transacts with a variety of financial institutions all with high credit quality to disperse credit risk, so it expects that the probability of counterparty default is remote.

(2) Financial assets at fair value through profit or loss

Items	December 31, 2019	December 31, 2018
Current items:		
Financial assets mandatorily measured at fair value through profit or loss		
Listed stocks	$ 69,001	$ 69,781
Beneficiary certificates	5,011	1,251,322
	$ 74,012	$ 1,321,103

A. Amounts recognized in profit or loss in relation to financial assets at fair value through profit or loss are listed below:

	Years ended December 31,	
	2019	2018
Financial assets mandatorily measured at fair value through profit or loss		
Equity instruments	($ 780)	($ 27,094)
Beneficiary certificates	6,544	7,854
	$ 5,764	($ 19,240)

B. The Group has no financial assets at fair value through profit or loss pledged to others.

(3) Financial assets at fair value through other comprehensive income

Items	December 31, 2019	December 31, 2018
Non-current items:		
Equity instruments		
Listed stocks	$ 492,258	$ 253,908
Emerging stocks	13,357	339,027
Unlisted stocks	1,353,863	1,058,137
	$ 1,859,478	$ 1,651,072

A. The Group has elected to classify equity instruments investments that are considered to be strategic investments as financial assets at fair value through other comprehensive income. The fair value of such investments amounted to $1,859,478 and $1,651,072 on December 31, 2019 and 2018, respectively.

B. Amounts recognized in other comprehensive income in relation to the financial assets at fair value through other comprehensive income are listed below:

	Years ended December 31,	
	2019	2018
Equity instruments at fair value through other comprehensive income		
Fair value change recognised in other comprehensive income	$ 227,352	$ 165,659
Cumulative losses reclassified to retained earnings due to derecognition	$ 41,212	$ -

C. The Group has no financial assets at fair value through other comprehensive income pledged to others.

(4) Financial assets at amortised cost

Items	December 31, 2019	December 31, 2018
Current items:		
Time deposits	$ 39,558,054	$ 31,286,209
Non-current items:		
Time deposits	$ 69,477	$ -

A. Details of the Group’s financial assets at amortised cost pledged to others as collateral are provided in Note 8.

B. Information relating to credit risk of financial assets at amortised cost is provided in Note 12(2).

(5) Accounts receivable

	December 31, 2019	December 31, 2018
Accounts receivable	$ 8,321,221	$ 5,693,973
Accounts receivable - related parties	2,209,114	1,783,992
Less: Allowance for bad debts	(79,607)	(58,172)
	$ 10,450,728	$ 7,419,793

A. The aging analysis of accounts receivable is as follows:

	December 31, 2019	December 31, 2018
Not past due	$ 10,153,312	$ 7,460,264
Up to 30 days	376,366	17,665
31 to 90 days	1	-
Over 90 days	656	36
	$ 10,530,335	$ 7,477,965

The above aging analysis is based on past due date.

B. As of December 31, 2019 and 2018, accounts receivable was all from contracts with customers. And as of January 1, 2018, the balance of receivables from contracts with customers amounted to $6,946,663.

C. The Group has no accounts receivable pledged to others.

D. Information relating to credit risk of accounts receivable is provided in Note 12(2).

(6) Inventories

	December 31, 2019		
	Cost	Allowance for obsolescence and market value decline	Book value
Raw materials	$ 1,054,744	($ 26,672)	$ 1,028,072
Work in process	4,624,767	(355,239)	4,269,528
Finished goods	2,550,754	(456,819)	2,093,935
Total	$ 8,230,265	($ 838,730)	$ 7,391,535

	December 31, 2018		
	Cost	Allowance for obsolescence and market value decline	Book value
Raw materials	$ 399,009	($ 23,147)	$ 375,862
Work in process	3,614,676	(218,774)	3,395,902
Finished goods	2,524,712	(434,471)	2,090,241
Total	$ 6,538,397	($ 676,392)	$ 5,862,005

Operating costs incurred on inventories for the years ended December 31, 2019 and 2018 were as follows:

	Years ended December 31,	
	2019	2018
Cost of inventories sold and others	$ 33,813,815	$ 25,003,275
Loss on market value decline and obsolete and slow-moving inventories	166,028	138,066
Loss on scrap inventory	180,847	203,535
	$ 34,160,690	$ 25,344,876

(7) Investments accounted for under equity method

	December 31, 2019	December 31, 2018
Technology Partner V Venture Capital Corporation	$ 22,247	$ 36,917
5V Technologies, Taiwan Ltd.	-	16,106
Estinet Technologies Incorporation	3,701	40,682
Innorich Venture Capital Corp.	160,024	167,923
	$ 185,972	$ 261,628

A. The loss on investments accounted for under equity method amounted to $23,833 and $43,307 for the years ended December 31, 2019 and 2018, respectively.

B. The Group’s held stocks in Technology Partner V Venture Capital Corporation decreased due to the return of capital in August of 2019 and the proceeds from stocks returned was $17,908.

C. Certain investments mentioned above have been impaired, and the Group recognized impairment loss amounting to $41,397 for the year ended December 31, 2019.

(8) Property, plant and equipment

	Buildings	Machinery	Test equipment	Office equipment	Others	Total
At January 1, 2019						
Cost	$ 3,246,163	$ 3,726,816	$ 2,225,944	$ 232,162	$ 754,293	$ 10,185,378
Accumulated depreciation and impairment	(1,197,942)	(3,456,955)	(1,514,287)	(151,702)	(547,914)	(6,868,800)
	$ 2,048,221	$ 269,861	$ 711,657	$ 80,460	$ 206,379	$ 3,316,578
2019						
Opening net book amount	$ 2,048,221	$ 269,861	$ 711,657	$ 80,460	$ 206,379	$ 3,316,578
Additions	-	147,583	425,288	51,034	126,070	749,975
Disposals	(18)	-	(105)	(124)	(2)	(249)
Reclassifications	-	27,167	-	-	(27,167)	-
Depreciation	(121,031)	(77,024)	(318,746)	(27,082)	(63,137)	(607,020)
Net exchange difference	(10,365)	2,109	(4,429)	(287)	(150)	(13,122)
Closing net book amount	$ 1,916,807	$ 369,696	$ 813,665	$ 104,001	$ 241,993	$ 3,446,162
At December 31, 2019						
Cost	$ 3,222,502	$ 3,899,552	$ 2,623,658	$ 280,814	$ 850,212	$ 10,876,738
Accumulated depreciation and impairment	(1,305,695)	(3,529,856)	(1,809,993)	(176,813)	(608,219)	(7,430,576)
	$ 1,916,807	$ 369,696	$ 813,665	$ 104,001	$ 241,993	$ 3,446,162

	Buildings	Machinery	Test equipment	Office equipment	Others	Total
At January 1, 2018						
Cost	$ 3,205,530	$ 3,611,076	$ 1,783,425	$ 204,663	$ 722,408	$ 9,527,102
Accumulated depreciation and impairment	(1,074,899)	(3,377,730)	(1,276,016)	(137,072)	(498,436)	(6,364,153)
	$ 2,130,631	$ 233,346	$ 507,409	$ 67,591	$ 223,972	$ 3,162,949
2018						
Opening net book amount	$ 2,130,631	$ 233,346	$ 507,409	$ 67,591	$ 223,972	$ 3,162,949
Additions	6,238	124,429	455,980	35,609	84,858	707,114
Disposals	(9)	-	(37)	(97)	-	(143)
Reclassifications	50,407	-	-	(567)	(50,826)	(986)
Depreciation	(130,452)	(88,176)	(251,035)	(21,630)	(48,744)	(540,037)
Net exchange difference	(8,594)	262	(660)	(446)	(2,881)	(12,319)
Closing net book amount	$ 2,048,221	$ 269,861	$ 711,657	$ 80,460	$ 206,379	$ 3,316,578
At December 31, 2018						
Cost	$ 3,246,163	$ 3,726,816	$ 2,225,944	$ 232,162	$ 754,293	$ 10,185,378
Accumulated depreciation and impairment	(1,197,942)	(3,456,955)	(1,514,287)	(151,702)	(547,914)	(6,868,800)
	$ 2,048,221	$ 269,861	$ 711,657	$ 80,460	$ 206,379	$ 3,316,578

A. Amount of borrowing costs capitalised as part of property, plant and equipment: None.

B. The Group has no property, plant and equipment pledged to others.

(9) Leasing arrangements－lessee

Effective 2019

A. The Group leases various assets including land and buildings. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose covenants, but leased assets may not be used as security for borrowing purposes.

B. The carrying amount of right-of-use assets and the depreciation are as follows:

	December 31, 2019	Year ended December 31, 2019
	Carrying amount	Depreciation
Land	$ 1,082,850	$ 20,983
Buildings	320,395	68,826
	$ 1,403,245	$ 89,809

C. For the year ended December 31, 2019, the additions to right-of-use assets were $432,193.

D. The information on profit and loss accounts relating to lease contracts is as follows:

	Year ended December 31, 2019
Items affecting profit or loss	
Interest expense on lease liabilities	$ 23,915

E. For the year ended December 31, 2019, the Group's total cash outflow for leases were $100,647.

(10) Investment property

	Buildings	
	2019	2018
At January 1		
Cost	$ 83,688	$ 85,694
Accumulated depreciation and impairment	(28,820)	(25,440)
	$ 54,868	$ 60,254
Opening net book value	$ 54,868	$ 60,254
Depreciation	(3,977)	(4,047)
Net exchange difference	(1,755)	(1,339)
Closing net book amount	$ 49,136	$ 54,868
At December 31		
Cost	$ 80,799	$ 83,688
Accumulated depreciation and impairment	(31,663)	(28,820)
	$ 49,136	$ 54,868

A. Rental income from the lease of the investment property and direct operating expenses arising from the investment property are shown below:

	Years ended December 31,	
	2019	2018
Rental income from the lease of the investment property	$ 1,486	$ 6,298
Operating expenses arising from the investment property that generated rental income during the year	$ 3,977	$ 4,047

B. The Group's investment property is located in Mainland China. The fair value is based on valuation information from Information Centre of Real Estate in local governments in Mainland China and is adjusted accordingly. As of December 31, 2019 and 2018, the fair value was $134,439 and $136,949 and classified as level 3, respectively.

(11) Intangible assets

	Computer software	Intellectual property	Goodwill	Others	Total
At January 1, 2019					
Cost	$ 3,234,611	$ 3,911,807	$ 650,778	$ 298,916	$ 8,096,112
Accumulated amortisation and impairment	(2,738,897)	(3,149,643)	(350,621)	(170,702)	(6,409,863)
	$ 495,714	$ 762,164	$ 300,157	$ 128,214	$ 1,686,249
2019					
Opening net book amount	$ 495,714	$ 762,164	$ 300,157	$ 128,214	$ 1,686,249
Additions	847,571	596,018	-	597	1,444,186
Transfers	1,800	-	-	(2,326)	(526)
Amortisation	(568,851)	(405,131)	-	(45,803)	(1,019,785)
Impairment loss	-	-	(148,086)	-	(148,086)
Net exchange difference	(14)	(2,658)	(5,054)	(1,352)	(9,078)
Closing net book amount	$ 776,220	$ 950,393	$ 147,017	$ 79,330	$ 1,952,960
At December 31, 2019					
Cost	$ 4,083,596	$ 4,500,995	$ 645,724	$ 291,141	$ 9,521,456
Accumulated amortisation and impairment	(3,307,376)	(3,550,602)	(498,707)	(211,811)	(7,568,496)
	$ 776,220	$ 950,393	$ 147,017	$ 79,330	$ 1,952,960

	Computer software	Intellectual property	Goodwill	Others	Total
At January 1, 2018					
Cost	$ 2,772,830	$ 3,751,440	$ 642,134	$ 298,771	$ 7,465,175
Accumulated amortisation and impairment	(2,241,399)	(2,673,224)	(350,621)	(121,576)	(5,386,820)
	$ 531,431	$ 1,078,216	$ 291,513	$ 177,195	$ 2,078,355
2018					
Opening net book amount	$ 531,431	$ 1,078,216	$ 291,513	$ 177,195	$ 2,078,355
Additions	460,145	164,064	-	1,800	626,009
Transfers	1,353	2,096	-	(10,161)	(6,712)
Amortisation	(497,239)	(452,899)	-	(44,714)	(994,852)
Net exchange difference	24	(29,313)	8,644	4,094	(16,551)
Closing net book amount	$ 495,714	$ 762,164	$ 300,157	$ 128,214	$ 1,686,249
At December 31, 2018					
Cost	$ 3,234,611	$ 3,911,807	$ 650,778	$ 298,916	$ 8,096,112
Accumulated amortisation and impairment	(2,738,897)	(3,149,643)	(350,621)	(170,702)	(6,409,863)
	$ 495,714	$ 762,164	$ 300,157	$ 128,214	$ 1,686,249

Details of amortisation on intangible assets are as follows:

	Years ended December 31,	
	2019	2018
Operating costs	$ 4,107	$ 3,907
Operating expenses	1,015,678	990,945
	$ 1,019,785	$ 994,852

(12) Impairment of non-financial assets

A. The Group recognized impairment loss for the year ended December 31, 2019 was $148,086. Details of such loss are as follows:

	Year ended December 31, 2019	
	Recognised in profit or loss	Recognised in other comprehensive income
Impairment loss－Goodwill	$ 148,086	$ -

B. Goodwill is allocated to the Group's cash-generating units identified according to operating segment. The recoverable amount of all cash-generating units has been determined based on value-in-use calculations. These calculations use pre-tax cash flow projections based on financial budgets approved by the management covering a five-year period. Cash flows beyond the five-year period are extrapolated using the estimated growth rates stated below.

Due to performance of the products acquiring from merger with Cortina was overestimated, the goodwill assessment for 2019 was conducted which is based on financial budgets estimated by the management covering a five-year period. The discount rate is 14.4%. The following sets forth the key assumptions that influence estimation of recoverable amounts and methods for determining key assumptions:

(a) Estimation of growth rate: Conservatively estimated the financial budget for the next 5 years at a zero growth rate.

(b) Costs of goods sold and gross margin: Based on financial budgets estimated by the management covering five-year period and historical experience.

(c) Estimation of operating expense: Estimated annual operating expenses are based on financial budgets estimated by the management covering five-year period and actual operating expense ratio.

The recoverable amount calculated based on the above assumptions is lower than the sum of carrying value of identifiable assets of the cash-generating unit and goodwill. Thus, there is impairment for the assets. The Group recognized impairment loss for the year ended December 31, 2019.

(13) Short-term borrowings

Type of borrowings	December 31, 2019	Interest rate range	Collateral
Bank borrowings			
Unsecured borrowings	$ 18,966,042	0.71%~2.64%	None

Type of borrowings	December 31, 2018	Interest rate range	Collateral
Bank borrowings			
Unsecured borrowings	$ 14,526,311	0.67%~4.16%	None

Interest expense recognized in profit or loss amounted to $136,339 and $140,387 for the years ended December 31, 2019 and 2018, respectively.

(14) Other payables

	December 31, 2019	December 31, 2018
Accrued salaries	$ 4,041,988	$ 3,390,433
Payable for employees' compensation	3,978,638	1,884,203
Other accrued expenses	1,715,223	1,235,690
Payables on equipment	113,350	110,401
Payables on software and intellectual property	725,345	684,438
Others	171,624	237,043
	$ 10,746,168	$ 7,542,208

(15) Pension

A. (a) The Company and its domestic subsidiaries have a defined benefit pension plan in accordance with the Labor Standards Law, covering all regular employees' service years prior to the enforcement of the Labor Pension Act on July 1, 2005 and service years thereafter of employees who chose to continue to be subject to the pension mechanism under the Law. Under the defined benefit pension plan, two units are accrued for each year of service for the first 15 years and one unit for each additional year thereafter, subject to a maximum of 45 units. Pension benefits are based on the number of units accrued and the average monthly salaries and wages of the last 6 months prior to retirement. The Company and its domestic

subsidiaries contribute monthly an amount equal to 2% of the employees' monthly salaries and wages to the retirement fund deposited with Bank of Taiwan, the trustee, under the name of the independent retirement fund committee. Also, the Company and its domestic subsidiaries would assess the balance in the aforementioned labor pension reserve account by December 31, every year. If the account balance is insufficient to pay the pension calculated by the aforementioned method to the employees expected to qualify for retirement in the following year, the Company and its domestic subsidiaries will make contributions for the deficit by next March.

(b) The amounts recognized in the balance sheet are determined as follows:

	December 31, 2019	December 31, 2018
Present value of defined benefit obligations	($ 595,932)	($ 568,382)
Fair value of plan assets	522,312	495,415
Net liability in the balance sheet	($ 73,620)	($ 72,967)

(c) Movement in net defined benefit liabilities are as follows:

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2019			
At January 1	($ 568,382)	$ 495,415	($ 72,967)
Current service cost	(2,709)	-	(2,709)
Interest (expense) income	(6,366)	5,544	(822)
	(577,457)	500,959	(76,498)
Remeasurements:			
Return on plan assets (excluding amounts included in interest income or expense)	-	24,973	24,973
Change in demographic assumptions	(1,283)	-	(1,283)
Change in financial assumptions	(6,415)	-	(6,415)
Experience adjustments	(20,397)	-	(20,397)
	(28,095)	24,973	(3,122)
Pension fund contribution	-	6,000	6,000
Paid pension	9,620	(9,620)	-
At December 31	($ 595,932)	$ 522,312	($ 73,620)

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2018			
At January 1	($ 536,470)	$ 473,679	($ 62,791)
Current service cost	(2,745)	-	(2,745)
Interest (expense) income	(6,675)	5,927	(748)
	(545,890)	479,606	(66,284)
Remeasurements:			
Return on plan assets (excluding amounts included in interest income or expense)	-	13,319	13,319
Change in demographic assumptions	(1,639)	-	(1,639)
Change in financial assumptions	(8,197)	-	(8,197)
Experience adjustments	(16,166)	-	(16,166)
	(26,002)	13,319	(12,683)
Pension fund contribution	-	6,000	6,000
Paid pension	3,510	(3,510)	-
At December 31	($ 568,382)	$ 495,415	($ 72,967)

(d) The Bank of Taiwan was commissioned to manage the Fund of the Company's and domestic subsidiaries' defined benefit pension plan in accordance with the Fund's annual investment and utilisation plan and the "Regulations for Revenues, Expenditures, Safeguard and Utilisation of the Labor Retirement Fund" (Article 6: The scope of utilisation for the Fund includes deposit in domestic or foreign financial institutions, investment in domestic or foreign listed, over-the-counter, or private placement equity securities, investment in domestic or foreign real estate securitization products, etc.). With regard to the utilisation of the Fund, its minimum earnings in the annual distributions on the final financial statements shall be no less than the earnings attainable from the amounts accrued from two-year time deposits with the interest rates offered by local banks.

(e) The principal actuarial assumptions used were as follows:

	Years ended December 31,	
	2019	2018
Discount rate	0.8%	1.125%
Future salary increases	5%	5.25%

Future mortality rate was estimated based on the 5th Taiwan Standard Ordinary Experience Mortality Table for the years ended December 31, 2019 and 2018.

Because the main actuarial assumption changed, the present value of defined benefit obligation is affected. The analysis was as follows:

	Discount rate		Future salary increases	
	Increase by 0.25%	Decrease by 0.25%	Increase by 0.25%	Decrease by 0.25%
December 31, 2019				
Effect on present value of defined benefit obligation	$ 16,562	($ 17,221)	($ 16,154)	$ 15,635

	Discount rate		Future salary increases	
	Increase by 0.25%	Decrease by 0.25%	Increase by 0.25%	Decrease by 0.25%
December 31, 2018				
Effect on present value of defined benefit obligation	$ 16,573	($ 17,256)	($ 16,206)	$ 15,665

The sensitivity analysis above is based on one assumption which changed while the other conditions remain unchanged. In practice, more than one assumption may change all at once. The method of analysing sensitivity and the method of calculating net pension liability in the balance sheet are the same.

(f) Expected contributions to the defined benefit pension plans of the Group for the year ending December 31, 2020 amounts to $6,000.

(g) As of December 31, 2019, the weighted average duration of the retirement plan is 13 years. The analysis of timing of the future pension payment was as follows:

Within 1 year	$ 281,271
2~5 years	112,554
5~10 years	197,517
Over 10 years	36,248
	$ 627,590

B. (a) Effective July 1, 2005, the Company and its domestic subsidiaries have established a defined contribution pension plan (the “New Plan”) under the Labor Pension Act (the “Act”), covering all regular employees with R.O.C. nationality. Under the New Plan, the Company and its domestic subsidiaries contribute monthly an amount based on 6% of the employees’ monthly salaries and wages to the employees’ individual pension accounts at the Bureau of Labor Insurance. The benefits accrued are paid monthly or in lump sum upon termination of employment.

(b) The Company’s mainland China subsidiaries, Realsil Microelectronics Corp., Realtek Semiconductor (Shen Zhen) Corp., Cortina Network Systems Shanghai Co., Ltd., and RayMX Microelectronics Corp. have a defined contribution plan. Monthly contributions to an independent fund administered by the government in accordance with the pension regulations in the People’s Republic of China (PRC) are based on certain percentage of employees’ monthly salaries and wages. Monthly contributions to an independent fund are

administered by the government. Other than the monthly contributions, the Group has no further obligations.

(c) The pension costs under the defined contribution pension plans of the Group for the years ended December 31, 2019 and 2018 were $259,176 and $231,441, respectively.

(16) Provision

	2019	2018
At January 1	$ 999,868	$ 901,430
Changes in provision	102,181	98,438
Effect of exchange rate	(26,240)	-
At December 31	$ 1,075,809	$ 999,868

As of December 31, 2019, provisions were estimated for possible infringement litigations.

(17) Share capital

A. As of December 31, 2019, the Company's authorised capital was $8,900,000, consisting of 890 million shares of ordinary stock (including 80 million thousand shares reserved for employee stock options), and the paid-in capital was $5,080,955 with a par value of $10 (in dollars) per share. All proceeds from shares issued have been collected. The beginning balance and closing balance of the number of the Company's ordinary shares outstanding of the period remain the same as in previous two periods.

Unit : Thousands of shares

	2019	2018
At January 1	508,095	506,506
Employees' compensation transferred to common stock	-	1,589
At December 31	508,095	508,095

B. On January 24, 2002, the Company increased its new common stock and sold its old common stock by issuing 13,924 thousand units of GDRs for cash. Each GDR unit represents 4 common stocks, so the total common stocks issued were 55,694 thousand shares. The Company's GDRs are traded in Luxembourg stock exchange. As of December 31, 2019, the outstanding GDRs were 312 thousand units, or 1,249 thousand shares of common stock, representing 0.25% of the Company's total common stocks.

(18) Capital surplus

Pursuant to the R.O.C. Company Act, capital surplus arising from paid-in capital in excess of par value on issuance of common stocks and donations can be used to cover accumulated deficit or to issue new stocks or cash to shareholders in proportion to their share ownership, provided that the Company has no accumulated deficit. Further, the R.O.C. Securities and Exchange Act requires that the amount of capital surplus to be capitalised mentioned above should not exceed 10% of the paid-in capital each year. Capital surplus should not be used to cover accumulated deficit unless the legal reserve is insufficient.

	2019			
	Share premium	Change in associates accounted for under equity method	Others	Total
At January 1	$ 3,196,250	$ 40,208	$ 201	$ 3,236,659
Change in associates accounted for under equity method	-	8,064	-	8,064
Cash from capital surplus	(508,095)	-	-	(508,095)
Cash dividends returned	-	-	226	226
At December 31	$ 2,688,155	$ 48,272	$ 427	$ 2,736,854

	2018			
	Share premium	Change in associates accounted for under equity method	Others	Total
At January 1	$ 3,540,653	$ 18,203	$ -	$ 3,558,856
Change in associates accounted for under equity method	-	22,005	-	22,005
Cash from capital surplus	(508,095)	-	-	(508,095)
Employees'compensation transferred to common stock	163,692	-	-	163,692
Cash dividends returned	-	-	201	201
At December 31	$ 3,196,250	$ 40,208	$ 201	$ 3,236,659

(19) Retained earnings

A. Under the Company's Articles of Incorporation, the current year's earnings, if any, shall first be used to pay all taxes and offset prior years' operating losses and then 10% of the remaining amount shall be set aside as legal reserve, if legal reserve has accumulated to an amount equal to the paid-in capital, then legal reserve is not required to be set aside any more. After that, special reserve shall be set aside or reversed in accordance with the related laws or the regulations made by the Competent Authority. The remainder, if any, along with prior year's accumulated undistributed earnings shall be proposed by the Board of Directors. However, the appropriation of earnings shall be resolved by the shareholders if earnings are distributed by issuing new shares, or the appropriation of earnings shall be resolved by the Board of Directors, if earnings are distributed in the form of cash. The Company should consider factors of finance, business and operations to appropriate distributable earnings for the period, and appropriate all or partial reserve in accordance with regulations and the Competent Authority. The Company's dividend policy takes into consideration the Company's future expansion plans and future cash flows. In accordance with the Company's dividend policy, cash dividends shall account for at least 10% of the total dividends distributed.

In accordance with Company Act Article 240, Item 5 and Article 241, Item 2, the resolution, for all or partial of distributable dividends, legal reserve and capital surplus are distributed in the form of cash, will be adopted by a majority vote at a meeting of the Board of Directors attended by two-thirds of the total number of directors, and will be reported to the shareholders.

B. Except for covering accumulated deficit or issuing new stocks or cash to shareholders in proportion to their share ownership, the legal reserve shall not be used for any other purpose. The use of legal reserve for the issuance of stocks or cash to shareholders in proportion to their share ownership is permitted, provided that the distribution of the reserve is limited to the portion in excess of 25% of the Company's paid-in capital.

C. In accordance with the regulations, the Company shall set aside special reserve from the debit balance on other equity items at the balance sheet date before distributing earnings. When debit balance on other equity items is reversed subsequently, the reversed amount could be included in the distributable earnings.

D. The appropriation of 2018 and 2017 earnings had been resolved at the stockholders' meeting on June 12, 2019 and June 5, 2018, respectively. Details are summarised below:

	2018		2017	
	Amount	Dividends per share (in dollars)	Amount	Dividends per share (in dollars)
Legal reserve	$ 435,077	$ -	$ 339,215	$ -
(Reversal of) special reserve	(600,443)	-	600,443	-
Cash dividends	3,048,573	6.00	2,286,430	4.50
Total	$ 2,883,207	$ 6.00	$ 3,226,088	$ 4.50

E. On June 12, 2019 and June 5, 2018, the stockholders resolved during their meeting to distribute $508,095 by cash ($1 per share) and $508,095 by cash ($1 per share) from capital surplus, respectively.

F. For the information relating to employees' compensation and directors' remuneration, please refer to Note 6(25).

(20) Other equity items

	2019		
	Unrealised gains (losses) on valuation	Currency translation difference	Total
At January 1	$ 272,153	$ 129,811	$ 401,964
Revaluation:			
–Group	227,352	-	227,352
–Associates	4,390	-	4,390
Reclassified to retained earnings	41,212	-	41,212
Currency translation differences:			
–Group	-	(891,954)	(891,954)
At December 31	$ 545,107	($ 762,143)	($ 217,036)

	2018			
	Unrealised gains (losses) on valuation	Available-for-sale investment	Currency translation difference	Total
At January 1	$ -	$ 212,720	($ 813,163)	($ 600,443)
Modified retrospective approach adjustment:				
Revaluation	538,977	(212,720)	-	326,257
Revaluation transferred to retained earnings	(103,142)	-	-	(103,142)
Revaluation:				
–Group	(165,659)	-	-	(165,659)
–Associates	1,977	-	-	1,977
Currency translation differences:				
–Group	-	-	942,974	942,974
At December 31	$ 272,153	$ -	$ 129,811	$ 401,964

(21) Operating revenue

	Years ended December 31,	
	2019	2018
Revenue from contracts with customers	$ 60,744,006	$ 45,805,746

A. Disaggregation of revenue from contracts with customers

The Group derives revenue from the transfer of goods and services at a point in time in the following major product lines:

Year ended December 31, 2019	Integrated circuit products	Others	Total
Revenue from external customer contracts	$ 60,623,210	$ 120,796	$ 60,744,006
Timing of revenue recognition			
At a point in time	$ 60,623,210	$ 120,796	$ 60,744,006

Year ended December 31, 2018	Integrated circuit products	Others	Total
Revenue from external customer contracts	$ 45,735,868	$ 69,878	$ 45,805,746
Timing of revenue recognition			
At a point in time	$ 45,735,868	$ 69,878	$ 45,805,746

B. Contract liabilities

The Group has recognized the following revenue-related contract liabilities:

	December 31, 2019	December 31, 2018	January 1, 2018
Contract liabilities – advance sales receipts	$ 104,974	$ 148,696	$ 103,169

Revenue recognized that was included in the contract liability balance at the beginning of the period:

	Years ended December 31,	
	2019	2018
Contract liabilities – advance sales receipts	$ 136,590	$ 91,285

C. Refund liabilities (shown in other current liabilities)

The Group estimates the discounts based on accumulated experience. The estimation is subject to an assessment at each reporting date.

The following refund liabilities:

	December 31, 2019	December 31, 2018
Refund liabilities – current	$ 5,368,247	$ 3,705,665

(22) Other income

	Years ended December 31,	
	2019	2018
Interest income:		
Interest income from bank deposits	$ 1,277,211	$ 989,290
Dividend income	30,150	32,942
Other income	105,418	112,739
	$ 1,412,779	$ 1,134,971

(23) Other gains and losses

	Years ended December 31, 2019	Years ended December 31, 2018
(Losses) gains on disposal of property, plant and equipment	($ 157)	$ 133
Net currency exchange losses	(125,351)	(35,720)
Gains (losses) on financial assets at fair value through profit or loss	5,764	(19,240)
Impairment loss of intangible assets	(148,086)	-
Impairment loss of investments accounted for under equity method	(41,397)	-
Other losses	(14,458)	(3,709)
	($ 323,685)	($ 58,536)

(24) Finance costs

	Years ended December 31, 2019	Years ended December 31, 2018
Interest expense		
Bank borrowings	$ 136,339	$ 140,387
Lease liabilities	23,915	-
	$ 160,254	$ 140,387

(25) Expenses by nature

	Years ended December 31, 2019	Years ended December 31, 2018
Employee benefit expenses	$ 13,777,223	$ 10,831,592
Depreciation	$ 700,806	$ 544,084
Amortisation	$ 1,019,785	$ 994,852

(26) Employee benefit expenses

	Years ended December 31, 2019	Years ended December 31, 2018
Wages and salaries	$ 12,900,156	$ 10,048,153
Labor and health insurance fees	440,945	394,056
Pension costs	262,707	234,934
Other personnel expenses	173,415	154,449
Total	$ 13,777,223	$ 10,831,592

A. In accordance with the Company's Articles of Incorporation, the Company shall appropriate no higher than 3% for directors' remuneration and no less than 1% for employees' compensation, if the Company generates profit. If the Company has accumulated deficit, earnings should be reserved to cover losses before the appropriation of directors' remuneration and employees' compensation. Aforementioned employees' compensation could be

distributed by cash or stocks. Specifics of the compensation are to be determined by a majority vote at a meeting of the Board of Directors attended by two-thirds of the total number of directors. The resolution should be reported to the shareholders during the shareholders' meeting.

B. For the years ended December 31, 2019 and 2018, employees' compensation was accrued at $2,097,424 and $1,151,674, respectively; directors' remuneration was accrued at $119,828 and $76,778, respectively. If the estimated amounts differ from the actual distribution resolved by the Board of Directors and the shareholders' meeting, the Company will recognize the change as an adjustment to income of next year.

Employees' cash compensation was $1,151,674, and directors' remuneration was $76,778 for 2018. Employees' compensation and directors' remuneration of 2018 as resolved at the meeting of the Board of Directors were in agreement with those amounts recognized in the 2018 financial statements.

Information about employees' compensation and directors' remuneration of the Company as resolved by the Board of Directors will be posted in the "Market Observation Post System" at the website of the Taiwan Stock Exchange.

(27) Income tax

A. Income tax expense

	Years ended December 31,	
	2019	2018
Current income tax:		
Current income tax on profits for the year	$ 396,097	$ 463,769
Tax on undistributed earnings	74,745	16,607
Prior year income tax over estimation	(19,067)	(35,671)
Total current income tax	451,775	444,705
Deferred income tax:		
Origination and reversal of temporary differences	(6,278)	(12,360)
Impact of change in tax rate	-	(125,925)
Total deferred income tax	(6,278)	(138,285)
Income tax expense	$ 445,497	$ 306,420

B. Reconciliation between income tax expense and accounting profit

	Years ended December 31,	
	2019	2018
Income tax calculated based on income before tax and statutory tax rate	$ 1,453,137	$ 946,174
Expenses disallowed by tax regulation and effects from tax-exempt income	(1,063,318)	(494,765)
Impact of change in tax rate	-	(125,925)
Prior year income tax over estimation	(19,067)	(35,671)
Income tax on undistributed surplus earnings	74,745	16,607
Income tax expense	$ 445,497	$ 306,420

C. Amounts of deferred income tax assets or liabilities as a result of temporary differences are as follows:

	Year ended December 31, 2019		
	January 1	Recognised in profit or loss	December 31
Deferred income tax assets:			
-Temporary differences:			
Unrealised loss on market price decline and obsolete and slow-moving inventories and others	$ 78,472	$ 35,691	$ 114,163
Deferred income tax liabilities:			
-Temporary differences:			
Unrealised exchange gain	(22,310)	(29,413)	(51,723)
	$ 56,162	$ 6,278	$ 62,440

	Year ended December 31, 2018		
	January 1	Recognised in profit or loss	December 31
Deferred income tax assets:			
-Temporary differences:			
Unrealised loss on market price decline and obsolete and slow-moving inventories and others	$ 65,551	$ 12,921	$ 78,472
Deferred income tax liabilities:			
-Temporary differences:			
Unrealised exchange gain	(21,749)	(561)	(22,310)
	$ 43,802	$ 12,360	$ 56,162

D. The amounts of deductible temporary differences that are not recognized as deferred income tax assets are as follows:

	December 31, 2019	December 31, 2018
Deductible temporary differences	$ 1,108,747	$ 783,339

E. The Company's income tax returns through 2017 have been assessed and approved by the Tax Authority.

F. Under the amendments to the Income Tax Act which was promulgated by the President of the Republic of China in Feburary 7, 2018, the Company's applicable income tax rate was raised from 17% to 20% effective from January 1, 2018. The Group has assessed the impact of the change in income tax rate.

(28) Earnings per share

	Year ended December 31, 2019		
	Amount after tax	Weighted average number of ordinary shares outstanding (shares in thousands)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders of the parent	$ 6,790,283	508,095	$ 13.36
Diluted earnings per share			
Profit attributable to ordinary shareholders of the parent	$ 6,790,283	508,095	
Assumed conversion of all dilutive potential ordinary shares			
Employees' compensation	-	8,926	
Profit attributable to ordinary shareholders of the parent plus assumed conversion of all dilutive potential ordinary shares	$ 6,790,283	517,021	$ 13.13

	Year ended December 31, 2018		
	Amount after tax	Weighted average number of ordinary shares outstanding (shares in thousands)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders of the parent	$ 4,350,768	507,712	$ 8.57
Diluted earnings per share			
Profit attributable to ordinary shareholders of the parent	$ 4,350,768	507,712	
Assumed conversion of all dilutive potential ordinary shares			
Employees' compensation	-	10,477	
Profit attributable to ordinary shareholders of the parent plus assumed conversion of all dilutive potential ordinary shares	$ 4,350,768	518,189	$ 8.40

(29) Supplemental cash flow information

Investing activities with partial cash payments

	Years ended December 31, 2019	Years ended December 31, 2018
Purchase of property, plant and equipment	$ 749,975	$ 707,114
Add: Opening balance of payable on equipment	110,401	33,141
Less: Ending balance of payable on equipment	(113,350)	(110,401)
Cash paid during the year	$ 747,026	$ 629,854

	Years ended December 31, 2019	Years ended December 31, 2018
Purchase of intangible assets	$ 1,444,186	$ 626,009
Add: Opening balance of payable on software and intellectual property	684,438	650,649
Less: Ending balance of payable on software and intellectual property	(725,345)	(684,438)
Cash paid during the year	$ 1,403,279	$ 592,220

(30) Changes in liabilities from financing activities

	Short-term borrowings	Guarantee deposits received	Lease liabilites	Liabilities from financing activities-gross
At January 1, 2019	$ 14,526,311	$ 4,887	$ 1,048,079	$ 15,579,277
Changes in cash flow from financing activities	4,439,731	(1,437)	(76,732)	4,361,562
Interest paid	-	-	(23,915)	(23,915)
Interest of lease liabilities	-	-	23,915	23,915
Changes in other non-cash items	-	-	141,328	141,328
At December 31, 2019	$ 18,966,042	$ 3,450	$ 1,112,675	$ 20,082,167

	Short-term borrowings	Guarantee deposits received	Liabilities from financing activities-gross
At January 1, 2018	$ 18,052,624	$ 5,165	$ 18,057,789
Changes in cash flow from financing activities	(3,526,313)	(278)	(3,526,591)
At December 31, 2018	$ 14,526,311	$ 4,887	$ 14,531,198

7. RELATED PARTY TRANSACTIONS

(1) Parent and ultimate controlling party

The ultimate controlling party of the Group is the Company.

(2) Names of related parties and relationship

Names of related parties	Relationship with the Company
G.M.I Technology Inc.	Other related party
Actions Semiconductor Co., Ltd.	Other related party
C-Media Electronics Inc.	Other related party
Greatek Electronics Inc.	Other related party
EmBestor Technology Inc.	Other related party

(3) Significant related party transactions and balances

A. Operating revenue

	Years ended December 31,	
	2019	2018
Sales of goods：		
G.M.I Technology Inc.	$ 11,392,557	$ 8,373,071
Others	280,803	442,676
	$ 11,673,360	$ 8,815,747

Goods are sold based on the price lists in force and terms that would be available to third parties, and the general collection term was 30 ~ 60 days after monthly billings.

B. Processing cost

	Years ended December 31,	
	2019	2018
Greatek Electronics Inc.	$ 1,322,403	$ 1,087,478

Processing cost is paid to associates on normal commercial terms and conditions, and the general payment term was 69 days after monthly billings.

C. Receivables from related parties

	December 31, 2019	December 31, 2018
Accounts receivable：		
G.M.I Technology Inc.	$ 2,142,256	$ 1,718,808
Other	54,461	53,263
	$ 2,196,717	$ 1,772,071

Aforementioned receivables were 30 ~ 60 days after monthly billings. The receivables from related parties arise mainly from sale transactions. The receivables are unsecured in nature and bear no interest.

D. Payables to related parties

	December 31, 2019	December 31, 2018
Accounts payable：		
Greatek Electronics Inc.	$ 329,514	$ 249,869

The payment term above was 69 days after monthly billings. The payables to related parties arise mainly from processing cost. The payables bear no interest.

E. Other transactions and other (receivables) payables:

	Years ended December 31,			
	2019		2018	
	Amount	Ending balance	Amount	Ending balance
Other related parties-				
Sales commissions	$ 444,257	$ 87,293	$ 354,542	$ 69,047
Cash dividends revenue	($ 16,698)	$ -	($ 19,420)	$ -
Technical royalty revenue	($ 4,430)	$ -	($ 7,799)	$ -

The payment term above was 49 days after monthly billings; collection term was 30 ~ 60 days after monthly billings.

(4) Key management compensation

	Years ended December 31,	
	2019	2018
Salaries and other short-term employee benefits	$ 120,242	$ 105,676
Post-employment benefits	2,697	2,557
Total	$ 122,939	$ 108,233

8. PLEDGED ASSETS

The Group's assets pledged as collateral are as follows:

Pledged asset	Book value December 31, 2019	Book value December 31, 2018	Purposes
Time deposits (shown in financial assets at amortised cost -current)	$ -	$ 30,270	Guarantee for customs duties for the importation of materials
"	-	35,789	Guarantee for leasing land and office in Science Park
Time deposits (shown in financial assets at amortised cost - non-current)	34,307	-	Guarantee for customs duties for the importation of materials
"	35,170	-	Guarantee for leasing land and office in Science Park
	$ 69,477	$ 66,059	

9. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED CONTRACT COMMITMENTS

(1) Contingencies

None.

(2) Operating lease agreements

Applicable for 2018

The Group leases land and office buildings for operational needs under non-cancellable operating lease agreements. The lease terms are between 2019 and 2027. Most of the lease agreements are renewable at the market price at the end of the lease period. The Group recognized rental expense of $85,701 for these leases in profit or loss for the year ended December 31, 2018.

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

	December 31, 2018
No later than one year	$ 69,071
Later than one year but not later than five years	149,106
Later than five years	39,910
	$ 258,087

10. SIGNIFICANT DISASTER LOSS

None.

11. SIGNIFICANT EVENTS AFTER THE BALANCE SHEET DATE

On February 21, 2020, the Board of Directors resolved at their meeting to enter into a property purchase contract, obtaining property in Zhongshan District, Taipei from Huaku Development Co., Ltd. with the transaction amount of 730 million NT dollars.

12. OTHERS

(1) Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Company may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

(2) Financial instruments

A. Financial instruments by category

	December 31, 2019	December 31, 2018
Financial assets		
Financial assets at fair value through profit or loss		
Financial assets mandatorily measured at fair value through profit or loss	$ 74,012	$ 1,321,103
Financial assets at fair value through other comprehensive income		
Designation of equity instrument	$ 1,859,478	$ 1,651,072
Financial assets at amortised cost/ Receivables		
Cash and cash equivalents	$ 5,727,911	$ 4,309,651
Financial assets at amortised cost	39,627,531	31,286,209
Accounts receivable (including related parties)	10,450,728	7,419,793
Other receivables (including related parties)	768,699	657,190
Refundable deposits	32,384	28,573
	$ 56,607,253	$ 43,701,416
Financial liabilities		
Financial liabilities at amortised cost		
Short-term borrowings	$ 18,966,042	$ 14,526,311
Notes payable	3,276	8,657
Accounts payable (including related parties)	7,771,238	5,885,855
Other accounts payable (including related parties)	10,833,461	7,611,255
Guarantee deposits received	3,450	4,887
Other financial liabilities	5,368,247	3,705,665
	$ 42,945,714	$ 31,742,630
Lease liability	$ 1,112,675	$ -

B. Financial risk management policies

(a) The Group's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk.

(b) Risk management is carried out by a finance division (Group finance) under policies approved by the Board of Directors. Group finance identifies, evaluates and hedges financial risks in close cooperation with the Group's operating units.

C. Significant financial risks and degrees of financial risks

(a) Market risk

Foreign exchange risk

i. The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the USD and CNY. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities and net investments in foreign operations.

ii. Management has set up a policy to require the Group to manage its foreign exchange risk against its functional currency. The Group is required to hedge its entire foreign exchange risk exposure with the Group finance.

iii. The Group's businesses involve some functional currency operations (the Company's functional currency: NTD；other certain subsidiaries' functional currency: USD and CNY). The information on assets and liabilities denominated in foreign currencies whose values would be materially affected by the exchange rate fluctuations is as follows:

	December 31, 2019		
	Foreign currency amount (In thousands)	Exchange rate	Book value (NTD)
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	$ 325,970	30.106	$ 9,813,647
Non-monetary items			
USD:NTD	1,285,500	30.106	38,701,252
Financial liabilities			
Monetary items			
USD:NTD	220,816	30.106	6,647,887

	December 31, 2018		
	Foreign currency amount (In thousands)	Exchange rate	Book value (NTD)
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	$ 179,859	30.733	$ 5,527,618
CNY:USD	71,029	0.1456	317,942
Non-monetary items			
USD:NTD	1,159,786	30.733	35,643,714
Financial liabilities			
Monetary items			
USD:NTD	134,264	30.733	4,126,322

The exchange loss including realised and unrealised arising from significant foreign exchange variation on the monetary items held by the Group for the years ended December 31, 2019 and 2018, amounted to $125,351 and $35,720, respectively.

Analysis of foreign currency market risk arising from significant foreign exchange variation:

	Year ended December 31, 2019		
	Sensitivity analysis		
	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	1%	$ 98,136	$ -
Non-monetary items			
USD:NTD	1%	-	387,103
Financial liabilities			
Monetary items			
USD:NTD	1%	(66,479)	-

	Year ended December 31, 2018		
	Sensitivity analysis		
	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	1%	$ 55,276	$ -
CNY:USD	1%	3,179	-
Non-monetary items			
USD:NTD	1%	-	356,437
Financial liabilities			
Monetary items			
USD:NTD	1%	(41,263)	-

Price risk

i. The Group's equity securities, which are exposed to price risk, are the held financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income.

ii. The Group's investments in equity securities comprise domestic listed and unlisted stocks. The prices of equity securities would change due to the change of the future value of investee companies. If the prices of these equity securities had increased/decreased by 10% with all other variables held constant, post-tax profit for the years ended December 31, 2019 and 2018 would have increased/decreased by $7,401 and $132,110, respectively, as a result of gains/losses on equity securities classified as at fair value through profit or loss. Other components of equity would have increased/decreased by $185,948 and $165,107, respectively, as a result of gains/losses on equity securities classified as at fair value through other comprehensive income.

Cash flow and fair value interest rate risk

The Group has no material interest rate risk.

(b) Credit risk

i. Credit risk refers to the risk of financial loss to the Group arising from default by the clients or counterparties of financial instruments on the contract obligations. The main factor is that counterparties could not repay in full the accounts receivable based on the agreed terms, and the contract cash flows of financial assets at amortised cost and at fair value through other comprehensive income.

ii. The Group manages their credit risk taking into consideration the entire group's concern. According to the Group's credit policy, each local entity in the Group is responsible for managing and analysing the credit risk for each of their new clients before standard payment and delivery terms and conditions are offered. Internal risk control assesses the credit quality of the customers, taking into account their financial position, past experience and other factors.

iii. The Group adopts the assumption under IFRS 9, that is, the default occurs when the contract payments are past due over 90 days.

iv. The Group adopts the following assumption under IFRS 9 to assess whether there has been a significant increase in credit risk on that instrument since initial recognition:

If the contract payments were past due over 30 days based on the terms, there has been a significant increase in credit risk on that instrument since initial recognition.

v. The following indicators are used to determine whether the credit impairment of debt instruments has occurred:

(i) It becomes probable that the issuer will enter bankruptcy or other financial reorganization due to their financial difficulties;

(ii) The disappearance of an active market for that financial asset because of financial difficulties;

(iii) Default or delinquency in interest or principal repayments;

(iv) Adverse changes in national or regional economic conditions that are expected to cause a default.

vi. The Group classifies customers' accounts receivable, contract assets and rents receivable in accordance with customer types. The Group applies the modified approach using provision matrix to estimate expected credit loss under the provision matrix basis.

vii. The Group wrote-off the financial assets, which cannot be reasonably expected to be recovered, after initiating recourse procedures. However, the Group will continue executing the recourse procedures to secure their rights.

viii. The Group used the forecast ability of semiconductor industry research report to adjust historical and timely information to assess the default possibility of accounts receivable. On December 31, 2019 and 2018, the provision matrix are as follows:

	Not past due	1~90 days past due	90 days past due	Total
At December 31, 2019				
Expected loss rate	0%~1%	0%~1%	100%	
Total book value	$ 10,153,312	$ 376,367	$ 656	$ 10,530,335
Loss allowance	$ 75,187	$ 3,764	$ 656	$ 79,607

	Not past due	1~90 days past due	90 days past due	Total
At December 31, 2018				
Expected loss rate	0%~1%	0.2%~1%	100%	
Total book value	$ 7,460,264	$ 17,665	$ 36	$ 7,477,965
Loss allowance	$ 58,031	$ 105	$ 36	$ 58,172

ix. Movements in relation to the Group applying the modified approach to provide loss allowance for accounts receivable are as follows:

	2019
	Loss allowance for accounts receivable
At January 1	$ 58,172
Provision for impairment	21,332
Effect of exchange rate	103
At December 31	$ 79,607

	2018
	Loss allowance for accounts receivable
At January 1	$ 59,792
Reversal of impairment loss	(1,721)
Effect of exchange rate	101
At December 31	$ 58,172

x. For financial assets at amortised cost, the credit rating levels are presented below:

	December 31, 2019			
		Lifetime		
	12 months	Significant increase in credit risk	Impairment of credit	Total
Financial assets at amortised cost	$ 39,627,531	$ -	$ -	$ 39,627,531

	December 31, 2018			
		Lifetime		
	12 months	Significant increase in credit risk	Impairment of credit	Total
Financial assets at amortised cost	$ 31,286,209	$ -	$ -	$ 31,286,209

The Group's financial assets at amortised cost are all time deposits with an original due date of more than three months, and there is no significant abnormality in credit risk assessment.

(c) Liquidity risk

i. Cash flow forecasting is performed in the operating entities of the Group and aggregated by Group finance. Group finance monitors forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities.

ii. Group finance invests surplus cash in interest bearing current accounts, time deposits, money market deposits and marketable securities, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient head-room as determined by the above-mentioned forecasts.

iii. The table below analyses the Group's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date for non-derivative financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows.

Non-derivative financial liabilities:

December 31, 2019	Less than 1 year	Between 1 and 5 years	Over 5 years
Short-term borrowings	$ 18,966,042	$ -	$ -
Notes payable	3,276	-	-
Accounts payable (including related parties)	7,771,238	-	-
Other payables (including related parties)	10,833,461	-	-
Lease liability	107,586	354,895	982,688
Guarantee deposits received	-	-	3,450
Other financial liabilities	5,368,247	-	-

Non-derivative financial liabilities:

December 31, 2018	Less than 1 year	Between 1 and 5 years	Over 5 years
Short-term borrowings	$ 14,526,311	$ -	$ -
Notes payable	8,657	-	-
Accounts payable (including related parties)	5,885,855	-	-
Other payables (including related parties)	7,611,255	-	-
Guarantee deposits received	-	-	4,887
Other financial liabilities	3,705,665	-	-

iv. The Group does not expect the timing of occurrence of the cash flows estimated through the maturity date analysis will be significantly earlier, nor expect the actual cash flow amount will be significantly different.

(3) Fair value information

A. The different levels that the inputs to valuation techniques are used to measure fair value of financial and non-financial instruments have been defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. A market is regarded as active where a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. The fair value of the Group's investment in listed stocks and beneficiary certificates is included in Level 1.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. The fair value of the Group's investment is included in Level 2.

Level 3: Unobservable inputs for the asset or liability. The fair value of the Group's investment in equity investment without active market is included in Level 3.

B. Fair value information of investment property at cost is provided in Note 6(10).

C. The related information of financial and non-financial instruments measured at fair value by level on the basis of the nature, characteristics and risks of the assets is as follows:

(a) The related information of nature of the assets is as follows:

December 31, 2019	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurement				
Financial assets at fair value through profit or loss				
Equity securities	$ 74,012	$ -	$ -	$ 74,012
Financial assets at fair value through other comprehensive income				
Equity securities	505,615	-	1,353,863	1,859,478
Total	$ 579,627	$ -	$ 1,353,863	$ 1,933,490

December 31, 2018	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurement				
Financial assets at fair value through profit or loss				
Equity securities	$ 1,321,103	$ -	$ -	$ 1,321,103
Financial assets at fair value through other comprehensive income				
Equity securities	592,935	-	1,058,137	1,651,072
Total	$ 1,914,038	$ -	$ 1,058,137	$ 2,972,175

(b) The methods and assumptions the Group used to measure fair value are as follows:

i. The instruments the Group used market quoted prices as their fair values (that is, Level 1) are listed below by characteristics:

	Listed shares	Closed-end fund	Open-end fund	Government bond	Corporate bond	Convertible (exchangeable) bond
Market quoted price	Closing price	Closing price	Net asset value	Translation price	Weighted average quoted price	Closing price

ii. Except for financial instruments with active markets, the fair value of other financial instruments is measured by using valuation techniques or by reference to counterparty quotes. The fair value of financial instruments measured by using valuation techniques can be referred to current fair value of instruments with similar terms and characteristics in substance, discounted cash flow method or other valuation methods, including calculated by applying model using market information available at the consolidated balance sheet date.

iii. The output of valuation model is an estimated value and the valuation technique may not be able to capture all relevant factors of the Group's financial and non-financial instruments. Therefore, the estimated value derived using valuation model is adjusted accordingly with additional inputs.

D. For the years ended December 31, 2019 and 2018, there was no transfer between Level 1 and Level 2.

E. The following chart is the movement of Level 3 for the years ended December 31, 2019 and 2018:

	2019	
	Non-derivative equity instrument	
At January 1	$	1,058,137
Gains recognised in other comprehensive income		295,726
At December 31	$	1,353,863

	2018	
	Non-derivative equity instrument	
At January 1	$	312,684
Modified retrospective adjustment		766,919
Gains recognised in other comprehensive income	(	49,466)
Acquired in the period		28,000
At December 31	$	1,058,137

F. For the years ended December 31, 2019 and 2018, there was no transfer into or out from Level 3.

G. The finance division is in charge of valuation procedures for fair value measurements being categorised within Level 3, which is to verify independent fair value of financial instruments. Such assessment is to ensure the valuation results are reasonable by applying independent information to make results close to current market conditions, confirming the resource of information is independent, reliable and in line with other resources and represented as the exercisable price, updating inputs used to the valuation model and making any other necessary adjustments to the fair value.

H. The following is the qualitative information of significant unobservable inputs and sensitivity analysis of changes in significant unobservable inputs to valuation model used in Level 3 fair value measurement:

	Fair value at December 31, 2019	Valuation technique	Significant unobservable input	Range (weighted average)	Relationship of inputs to fair value
Non-derivative equity instrument:					
Unlisted shares	$ 115,580	Market comparable companies	Price to book ratio multiple	3.58	The higher the multiple, the higher the fair value
〃	19,791	Net asset value	Not applicable	-	Not applicable
Private equity fund investment	1,218,492	Net asset value	Not applicable	-	Not applicable

		Fair value at December 31, 2018	Valuation technique	Significant unobservable input	Range (weighted average)	Relationship of inputs to fair value
Non-derivative equity instrument:						
Unlisted shares	$	117,986	Market comparable companies	Price to book ratio multiple	2.56	The higher the multiple, the higher the fair value
〃		28,000	The last transaction price of the non-active market	Not applicable	-	Not applicable
Private equity fund investment		912,151	Net asset value	Not applicable	-	Not applicable

I. The Group has carefully assessed the valuation models and assumptions used to measure fair value; therefore, the fair value measurement is reasonable. However, use of different valuation models or assumptions may result in different measurement. The following is the effect of profit or loss or of other comprehensive income from financial assets and liabilities categorised within Level 3 if the inputs used to valuation models have changed:

			December 31, 2019			
			Recognised in profit or loss		Recognised in other comprehensive income	
	Input	Change	Favourable Change	Unfavourable change	Favourable Change	Unfavourable change
Financial assets						
Equity instrument	Price to book ratio multiple	± 1%	$ -	$ -	$ 1,581	($ 1,581)

			December 31, 2018			
			Recognised in profit or loss		Recognised in other comprehensive income	
	Input	Change	Favourable Change	Unfavourable change	Favourable Change	Unfavourable change
Financial assets						
Equity instrument	Price to book ratio multiple	± 1%	$ -	$ -	$ 1,232	($ 1,232)

13. SUPPLEMENTARY DISCLOSURES

(1) Significant transactions information

A. Loans to others: Please refer to table 1.

B. Provision of endorsements and guarantees to others: Please refer to table 2.

C. Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures): Please refer to table 3.

D. Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company's paid-in capital: Please refer to table 4.

E. Acquisition of real estate reaching $300 million or 20% of paid-in capital or more: None.

F. Disposal of real estate reaching $300 million or 20% of paid-in capital or more: None.

G. Purchases or sales of goods from or to related parties reaching $100 million or 20% of paid-in capital or more: Please refer to table 5.

H. Receivables from related parties reaching $100 million or 20% of paid-in capital or more: Please refer to table 6.

I. Trading in derivative instruments undertaken during the reporting periods: None.

J. Significant inter-company transactions during the reporting periods: Please refer to table 7.

(2) Information on investees

Names, locations and other information of investee companies (not including investees in Mainland China): Please refer to table 8.

(3) Information on investments in Mainland China

A. Basic information: Please refer to table 9.

B. Significant transactions, either directly or indirectly through a third area, with investee companies in the Mainland Area: Please refer to table 1, table 2 and table 7.

14. SEGMENT INFORMATION

(1) General information

The Group operates business only in a single industry. The Chief Operating Decision-Maker, who allocates resources and assesses performance of the Group as a whole, has identified that the Group has only one reportable operating segment.

(2) Measurement of segment information

The Chief Operating Decision-Maker assesses the performance of the operating segments based on the consolidated financial statements. The accounting policy of operating segments is the same as that described in Note 4.

(3) Information on segment profit (loss), assets and liabilities

Information on segment profit (loss), assets and liabilities referring to the revenue from external customers and segmental financial information reported to the chief operating decision-maker is measured in a manner consistent with that in the consolidated statement of comprehensive income and financial information.

(4) Reconciliation for segment profit (loss)

Reconciliation for segment income (loss) referring to the segment assets, liabilities and profit before income tax reported to the chief operating decision-maker is measured in a manner consistent with balance sheets and the consolidated statement of comprehensive income. Thus, reconciliation is not needed.

(5) Revenue information by category

Revenue from external customers is derived from the sale of integrated circuits. Other income is derived from design, royalty and technical services. Breakdown of the revenue from all sources are as follows:

	Years ended December 31,	
	2019	2018
Revenue from ICs	$ 60,623,210	$ 45,735,868
Others	120,796	69,878
Total	$ 60,744,006	$ 45,805,746

(6) Revenue information by geographic area

Geographical information for the years ended December 31, 2019 and 2018 is as follows:

	Year ended December 31, 2019		Year ended December 31, 2018	
	Revenue	Non-current assets	Revenue	Non-current assets
Taiwan	$ 40,845,708	$ 5,804,262	$ 32,194,291	$ 4,027,191
Asia	19,898,298	921,103	13,611,455	1,021,286
Others	-	155,400	-	30,814
Total	$ 60,744,006	$ 6,880,765	$ 45,805,746	$ 5,079,291

Note: Non-current assets exclude financial instruments and deferred income tax assets.

(7) Major customer information

Major customer information of the Group for the years ended December 31, 2019 and 2018 is as follows:

	Year ended December 31, 2019		
	Revenue	Percentage	Segment
Customer B	$ 13,368,262	22%	The whole group
Customer D	11,392,557	19%	〃
Customer A	10,014,670	16%	〃

	Year ended December 31, 2018		
	Revenue	Percentage	Segment
Customer A	$ 10,575,725	23%	The whole group
Customer B	10,505,983	23%	〃
Customer D	8,373,071	18%	〃

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Loans to others

For the year ended December 31, 2019

Table 1

Expressed in thousands of NTD

(Except as otherwise indicated)

No (Note 1)	Creditor	Borrower	General ledger account	Is a related party	Maximum outstanding balance during the year ended December 31, 2019 (Note 3)	Balance at December 31, 2019	Actual amount drawn down (Note 4)	Interest rate	Nature of loan	Amount of transactions with the borrower	Reason for short-term financing	Allowance for doubtful accounts	Collateral Item	Collateral Value	Limit on loans granted to a single party	Ceiling on total loans granted (Note 2)	Footnote
0	Realtek Semiconductor Corporation	Realtek Singapore Private Limited	Other receivables-related parties	Y	$ 903,180	$ 903,180	$ -	-	Short-term financing	$ -	Operations	$ -	None	$ -	$ 2,721,899	$ 10,887,594	None
0	Realtek Semiconductor Corporation	Amber Universal Inc.	Other receivables-related parties	Y	602,120	602,120	602,120	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Bluocean Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	1,490,247	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Talent Eagle Enterprise Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	1,737,116	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Leading Enterprises Limited	Other receivables-related parties	Y	1,806,360	1,806,360	1,806,360	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
1	Leading Enterprises Limited	Bluocean Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
1	Leading Enterprises Limited	Talent Eagle Enterprise Inc.	Other receivables-related parties	Y	6,021,200	6,021,200	5,127,161	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
2	Amber Universal Inc.	Bluocean Inc.	Other receivables-related parties	Y	1,505,300	1,505,300	1,505,300	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
3	Cortina Access, Inc.	Leading Enterprises Limited	Other receivables-related parties	Y	903,180	903,180	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Loans to others

For the year ended December 31, 2019

Table 1

Expressed in thousands of NTD
(Except as otherwise indicated)

No (Note 1)	Creditor	Borrower	General ledger account	Is a related party	Maximum outstanding balance during the year ended December 31, 2019 (Note 3)	Balance at December 31, 2019	Actual amount drawn down (Note 4)	Interest rate	Nature of loan	Amount of transactions with the borrower	Reason for short-term financing	Allowance for doubtful accounts	Collateral Item	Collateral Value	Limit on loans granted to a single party	Ceiling on total loans granted (Note 2)	Footnote
4	Realtek Investment Singapore Private Limited	Realtek Singapore Private Limited	Other receivables-related parties	Y	3,010,600	3,010,600	1,255,420	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Loans to others

For the year ended December 31, 2019

Table 1

Expressed in thousands of NTD
(Except as otherwise indicated)

No (Note 1)	Creditor	Borrower	General ledger account	Is a related party	Maximum outstanding balance during the year ended December 31, 2019 (Note 3)	Balance at December 31, 2019	Actual amount drawn down (Note 4)	Interest rate	Nature of loan	Amount of transactions with the borrower	Reason for short-term financing	Allowance for doubtful accounts	Collateral		Limit on loans granted to a single party	Ceiling on total loans granted (Note 2)	Footnote
													Item	Value			
5	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	Other receivables-related parties	Y	$ 903,180	$ 903,180	$ -	-	Short-term financing	$ -	Operations	$ -	None	$ -	$ 10,887,594	$ 10,887,594	None
6	Realsil Microelectronics Corp.	RayMX Microelectronics Corp.	Other receivables-related parties	Y	345,736	345,736	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
6	Realsil Microelectronics Corp.	Suzhou Hongwei Microelectronic Corp.	Other receivables-related parties	Y	345,736	345,736	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
7	Cortina Network systems Shanghai Co., Ltd.	Realsil Microelectronics Corp.	Other receivables-related parties	Y	129,651	129,651	43,217	4.35	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None

Note 1: The numbers filled in for the loans provided by the Company or subsidiaries are as follows:

(1) The Company is '0'.

(2) The subsidiaries are numbered in order starting from '1'.

Note 2: The Company's "Procedures for Provision of Loans" are as follows:

(1) Ceiling on total loans granted by the Company to all parties is 40% of the Company's net assets value as per its most recent financial statements.

(2) Limit on loans to a single party with business transactions is the business transactions occurred between the creditor and borrower in the current year. The business transaction amount is the higher of purchasing and selling during current year on the year of financing.

(3) For companies needing for short-term financing, the cumulative lending amount may not exceed 40% of the borrowing company's net assets based on its latest financial statements audited or reviewed by independent accountants.

The amount the Company or its subsidiaries lend to an individual entity may not exceed 10% of the Company's or subsidiary's net assets based on its latest financial statements audited or reviewed by independent accountants.

For the foreign companies which the Company holds 100% of the voting rights directly or indirectly, limit on loans is not restricted as stipulated in the above item (3). However, the ceiling on total loans and limit on loans to a single party may not exceed 40% of the Company's net assets based on its latest financial statements audited or reviewed by independent accountants.

Note 3: Accumulated maximum outstanding balance of loans to others as of the reporting month of the current period.

Note 4: Fill in the actual amount of loans to others used by the borrowing company.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Provision of endorsements and guarantees to others

For the year ended December 31, 2019

Table 2

Expressed in thousands of NTD
(Except as otherwise indicated)

Number (Note 1)	Endorser/ guarantor	Party being endorsed/guaranteed: Company name	Party being endorsed/guaranteed: Relationship with the endorser/ guarantor (Note 2)	Limited on endorsements/ guarantees provided for a single party (Note 3)	Maximum outstanding endorsement/ amount as of December 31, 2019 (Note 4)	Outstanding endorsement/ guarantee amount at December 31, 2019 (Note 5)	Actual amont drawn down (Note 6)	Amount of endorsements/ gurantees secured with collateral	Ratio of accumulated endorsement/ guarantee amount to net asset value of the endorser/ guarantor company	Ceiling on total amount of endorsements/ guarantees provided (Note 3)	Provision of endorsements/ guarantees by parent company to subsidiary (Note 7)	Provision of endorsements/ guarantees by subsidiary to parent company (Note 7)	Provision of endorsements/ guarantees to the party in Mainland China (Note 7)	Footnote
0	Realtek Semiconductor Corporation	Realtek Singapore Private Limited	2	$ 13,609,493	$ 2,721,899	$ 2,721,899	$ -	$ -	10%	$ 13,609,493	Y	N	N	
0	Realtek Semiconductor Corporation	Leading Enterprises Limited	2	13,609,493	5,443,797	5,443,797	361,272	-	20%	13,609,493	Y	N	N	
0	Realtek Semiconductor Corporation	Realsil Microelectronics Corp.	2	13,609,493	816,570	816,570	-	-	3%	13,609,493	Y	N	Y	
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	2	13,609,493	816,570	816,570	7,092	-	3%	13,609,493	Y	N	Y	
1	Leading Enterprises Limited	Realsil Microelectronics Corp.	2	13,609,493	602,120	602,120	-	-	2%	13,609,493	N	N	Y	
2	Realsil Microelectronics Corp.	RayMX Microelectronics Corp.	2	13,609,493	602,120	602,120	-	-	2%	13,609,493	N	N	Y	

Note 1: The numbers filled in for the endorsements/guarantees provided by the Company or subsidiaries are as follows:

(1)The Company is '0'.

(2)The subsidiaries are numbered in order starting from '1'.

Note 2: Relationship between the endorser/guarantor and the party being endorsed/guaranteed is classified into the following six categories:

(1) Having business relationship.

(2) The endorser/guarantor parent company owns directly and indirectly more than 50% voting shares of the endorsed/guaranteed subsidiary.

(3) The endorsed/guaranteed company owns directly and indirectly more than 50% voting shares of the endorser/guarantor parent company.

(4) The endorser/guarantor parent company owns directly and indirectly more than 90% voting shares of the endorsed/guaranteed company.

(5) Mutual guarantee of the trade as required by the construction contract.

(6) Due to joint venture, each shareholder provides endorsements/guarantees to the endorsed/guaranteed company in proportion to its ownership.

(7) Joint guarantee of the performance guarantee for pre-sold home sales contract as required under the Consumer Protection Act.

Note 3: Ceiling on total endorsements/guarantees granted by the Company and subsidiaries is 50% of the Company's net asset based on the latest financial statements audited or reviewed by independent accountants, and limit on endorsements/guarantees to a single party is 50% of the Company's net asset based on the latest financial statements audited or reviewed by independent accountants.

Note 4: Fill in the year-to-date maximum outstanding balance of endorsements/guarantees provided as of the reporting period.

Note 5: Fill in the amount approved by the Board of Directors or the chairman if the chairman has been authorised by the Board of Directors based on subparagraph 8, Article 12 of the Regulations Governing Loaning of Funds and Making of Endorsements/Guarantees by Public Companies.

Note 6: Fill in the actual amount of endorsements/guarantees used by the endorsed/guaranteed company.

Note 7: Fill in 'Y' for those cases of provision of endorsements/guarantees by listed parent company to subsidiary and provision by subsidiary to listed parent company, and provision to the party in Mainland China.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures)

December 31, 2019

Table 3

Expressed in thousands of NTD
(Except as otherwise indicated)

Securities held by	Marketable securities (Note 1)	Relationship with the securities issuer(Note 2)	General ledger account	As of December 31, 2019 Number of shares	Book value (Note 3)	Ownership (%)	Fair value	Footnote (Note 4)
Realtek Semiconductor Corporation	C-media Electronics Inc. - Common stock	Other related parties	Financial assets at fair value through profit or loss	1,623,501	$ 28,736	2.05%	$ 28,736	
Realking Investment Limited	Compal broadband networks Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	3,575,000	104,033	5.34%	104,033	
Realsun Investment Co., Ltd.	Shieh-Yong Investment Co., Ltd. - Common stock	None	Financial assets at fair value through other comprehensive income	23,124,000	216,401	3.03%	216,401	
Realsun Investment Co., Ltd.	Compal broadband networks Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	3,575,000	104,033	5.34%	104,033	
Leading Enterprises Limited	Fortemedia Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	8,623,301	97,516	6.89%	97,516	
Leading Enterprises Limited	Starix Technology, Inc.- Preferred stock	None	Financial assets at fair value through other comprehensive income	5,000,000	18,064	-	18,064	
Leading Enterprises Limited	Octtasia Investment Holding Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	9,000,000	657,021	12.49%	657,021	
Amber Universal Inc.	Octtasia Investment Holding Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	4,726,836	345,070	6.56%	345,070	
Hung-wei Venture Capital Co., Ltd.	United Microelectronics Corporation - Common stock	None	Financial assets at fair value through other comprehensive income	336,346	5,533	-	5,533	
Hung-wei Venture Capital Co., Ltd.	C-media Electronics Inc.- Common stock	Other related parties	Financial assets at fair value through profit or loss	2,274,875	40,265	2.88%	40,265	
Hung-wei Venture Capital Co., Ltd.	Greatek Electroninc Inc. - Common stock	Other related parties	Financial assets at fair value through other comprehensive income	5,823,602	278,659	1.05%	278,659	
Hung-wei Venture Capital Co., Ltd.	Subtron technology Co., Ltd - Common stock	None	Financial assets at fair value through other comprehensive income	1,093,968	13,357	0.33%	13,357	
Hung-wei Venture Capital Co., Ltd.	Embestor Technology Inc. - Common stock	Other related parties	Financial assets at fair value through other comprehensive income	2,800,000	19,791	12.17%	19,791	
Cortina Network Systems Shanghai Co., Ltd.	Tian Tianjin Aggressive Fund	None	Financial assets at fair value through profit or loss	934,291	5,007	-	5,007	

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures)

December 31, 2019

Table 3

Expressed in thousands of NTD
(Except as otherwise indicated)

Securities held by	Marketable securities (Note 1)	Relationship with the securities issuer(Note 2)	General ledger account	As of December 31, 2019				Footnote (Note 4)
				Number of shares	Book value (Note 3)	Ownership (%)	Fair value	
Bluocean Inc.	CyWeeMotion Group Limited	None	Financial assets at fair value through other comprehensive income	4,800,000	$ -	6.59%	$ -	
RayMX Microelectronics Corp.	Tian Li Bao Money Fund	None	Financial assets at fair value through profit or loss	712	4	-	4	

Note 1: Marketable securities in the table refer to stocks, bonds, beneficiary certificates and other related derivative securities within the scope of IFRS 9 'Financial instrument'.

Note 2: Leave the column blank if the issuer of marketable securities is non-related party.

Note 3: Fill in the amount after adjusted at fair value and deducted by accumulated impairment for the marketable securities measured at fair value; fill in the acquisition cost or amortised cost deducted by accumulated impairment for the marketable securities not measured at fair value.

Note 4: The number of shares of securities and their amounts pledged as security or pledged for loans and their restrictions on use under some agreements should be stated in the footnote if the securities presented herein have such conditions.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company's paid-in capital

For the year ended December 31, 2019

Table 4

Expressed in thousands of NTD

(Except as otherwise indicated)

					Balance as at January 1, 2019		Additions		Disposals				Balance as at December 31, 2019	
Investor	Marketable securities	General ledger account	Counterparty	Relationship with the investor	Number of shares	Amount	Number of shares	Amount	Number of shares	Selling price	Book value	Gain (loss) on disposal	Number of shares	Amount
Talent Eagle Enterprise Inc.	Ubilinx Technology Inc.	Equity investments under equity method	Ubilinx Technology Inc.	Investee company accounted for under equity method	26,000,000	$ 799,058	14,000,000	$ 405,182	-	$ -	$ -	$ -	40,000,000	$ 1,204,240

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Purchases or sales of goods from or to related parties reaching NT$100 million or 20% of paid-in capital or more

For the year ended December 31, 2019

Table 5

Expressed in thousands of NTD
(Except as otherwise indicated)

			Transaction				Differences in transaction terms compared to third party transactions		Notes/accounts receivable(payable)		
Purchase/seller	Counterparty	Relationship with the counterparty	Purchase (sales)	Amount	Percentage of total purchase (sales)	Credit term	Unit price	Credit term	Balance	Percentage of total notes/accounts receivable (payable)	Footnote
Realtek Semiconductor Corporation	G.M.I Technology Inc.	Other related parties	(Sales)	($ 5,996,976)	(10%)	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	$ 1,172,793	11%	
Realtek Singapore Private Limited	G.M.I Technology Inc.	Other related parties	(Sales)	(5,226,296)	(9%)	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	929,236	9%	
RayMX Microelectronics Corp.	G.M.I Technology Inc.	Other related parties	(Sales)	(169,283)	(0%)	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	40,227	0%	
Realtek Semiconductor Corporation	Greatek Electronics Inc.	Other related parties	Purchase	1,024,163	3%	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	(313,185)	(4%)	
Realtek Singapore Private Limited	Greatek Electronics Inc.	Other related parties	Purchase	298,240	1%	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	(16,329)	(0%)	

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Receivables from related parties reaching NT$100 million or 20% of paid-in capital or more

December 31, 2019

Table 6

Expressed in thousands of NTD
(Except as otherwise indicated)

					Overdue receivables			
Creditor	Counterparty	Relationship with the counterparty	Balance as at December 31, 2019	Turnover rate	Amount	Action taken	Amount collected subsequent to the balance sheet date	Allowance for doubtful accounts
Realtek Semiconductor Corporation	G.M.I Technology Inc.	Other related parties	$ 1,172,793	5.57	$ -	-	$ 569,399	$ 11,847
Realtek Singapore Private Limited	G.M.I Technology Inc.	Other related parties	929,236	6.27	-	-	368,596	-

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
Significant inter-company transactions during the reporting period
For the year ended December 31, 2019

Table 7

Expressed in thousands of NTD
(Except as otherwise indicated)

Number (Note 1)	Company name	Counterparty	Relationship (Note 2)	Transaction: General ledger account	Transaction: Amount	Transaction: Transaction terms	Transaction: Percentage of consolidated total operating revenues or total assets (Note 3)
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	1	Other receivables	$ 48,980	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.07%
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	1	Sales revenue	65,119	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.11%
1	Leading Enterprises Limited	Realtek Semiconductor (Japan) Corp.	3	Technical service fees	34,049	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.06%
2	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	3	Technical service fees	1,639,884	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	2.70%
2	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	3	Other payables	552,750	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.75%
2	Realtek Singapore Private Limited	Realtek Semiconductor (Shen Zhen) Corp.	3	Technical service fees	347,426	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.57%
2	Realtek Singapore Private Limited	Realtek Semiconductor (Shen Zhen) Corp.	3	Other payables	116,209	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.16%

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES
Significant inter-company transactions during the reporting period
For the year ended December 31, 2019

Table 7

Expressed in thousands of NTD
(Except as otherwise indicated)

				Transaction			
Number (Note 1)	Company name	Counterparty	Relationship (Note 2)	General ledger account	Amount	Transaction terms	Percentage of consolidated total operating revenues or total assets (Note 3)
2	Realtek Singapore Private Limited	Cortina Access, Inc.	3	Technical service fees	$ 214,462	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.35%
2	Realtek Singapore Private Limited	Cortina Access, Inc.	3	Other payables	20,143	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.03%
2	Realtek Singapore Private Limited	Cortina Network Systems Shanghai Co., Ltd.	3	Technical service fees	106,735	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.18%
2	Realtek Singapore Private Limited	Cortina Network Systems Shanghai Co., Ltd.	3	Other payables	27,690	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.04%
2	Realtek Singapore Private Limited	Cortina Systems Taiwan Limited	3	Technical service fees	96,982	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.16%
2	Realtek Singapore Private Limited	Realtek Semiconductor (Japan) Corp.	3	Technical service fees	35,055	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.06%
2	Realtek Singapore Private Limited	RayMX Microelectronics Corp.	3	Other receivables	48,980	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.07%

Note 1: The numbers filled in for the transaction company in respect of inter-company transactions are as follows:
(1) Parent company is ‘0’.
(2) The subsidiaries are numbered in order starting from ‘1’.

Note 2: Relationship between transaction company and counterparty is classified into the following three categories; fill in the number of category each case belongs to (If transactions between parent company and subsidiaries or between subsidiaries refer to the same transaction, it is not required to disclose twice. For example, if the parent company has already disclosed its transaction with a subsidiary, then the subsidiary is not required to disclose the transaction; for transactions between two subsidiaries, if one of the subsidiaries has disclosed the transaction, then the other is not required to disclose the transaction.):
(1) Parent company to subsidiary.
(2) Subsidiary to parent company.
(3) Subsidiary to subsidiary

Note 3: Regarding percentage of transaction amount to consolidated total operating revenues or total assets, it is computed based on period-end balance of transaction to consolidated total assets for balance sheet accounts and based on accumulated transaction amount for the period to consolidated total operating revenues for income statement accounts.

Note 4: Only transactions above NT$10 million are disclosed. Transactions of related parties are not further disclosed here.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Information on investees

For the year ended December 31, 2019

Table 8

Expressed in thousands of NTD

(Except as otherwise indicated)

Investor	Investee	Location	Main business activities	Initial investment amount: Balance as at December 31, 2019	Initial investment amount: Balance as at December 31, 2018	Shares held as at December 31, 2019: Number of shares	Shares held as at December 31, 2019: Ownership (%)	Shares held as at December 31, 2019: Book value	Net profit (loss) of the investee for the year ended December 31, 2019	Investment income (loss) recognised by the Company for the year ended December 31, 2019	Footnote
Realtek Semiconductor Corporation	Leading Enterprises Limited	British Virgin Islands	Investment holdings	$ 15,005,734	$ 15,318,249	39,130	100%	$ 11,151,040	$ 282,019	$ 282,019	Subsidiary
Realtek Semiconductor Corporation	Amber Universal Inc.	British Virgin Islands	Investment holdings	4,739,146	4,837,812	41,432	100%	3,312,175	87,008	87,008	Subsidiary
Realtek Semiconductor Corporation	Realtek Singapore Private Limited	Singapore	ICs manufacturing, design, research, development, sales, and marketing	2,408,480	2,458,640	80,000,000	89.03%	10,370,572	6,306,957	5,638,064	Subsidiary
Realtek Semiconductor Corporation	Bluocean Inc.	Cayman Islands	Investment holdings	3,313,165	3,382,167	110,050,000	100%	3,479,391	111,913	111,913	Subsidiary
Realtek Semiconductor Corporation	Talent Eagle Enterprise Inc.	Cayman Islands	Investment holdings	3,435,095	3,506,635	114,100,000	100%	2,585,499	(278,776)	(278,776)	Subsidiary
Realtek Semiconductor Corporation	Realtek Investment Singapore Private Limited	Singapore	Investment holdings	6,021,200	6,146,600	200,000,000	100%	6,494,453	203,956	203,956	Subsidiary
Realtek Semiconductor Corporation	Realsun Investments Co., Ltd.	Taiwan	Investment holdings	280,000	280,000	28,000,000	100%	354,481	6,966	6,966	Subsidiary
Realtek Semiconductor Corporation	Hung-wei Venture Capital Co., Ltd.	Taiwan	Investment holdings	250,000	250,000	25,000,000	100%	418,438	19,668	19,668	Subsidiary
Realtek Semiconductor Corporation	Realking Investments Limited	Taiwan	Investment holdings	293,930	293,930	29,392,985	100%	286,939	(1,384)	(1,384)	Subsidiary
Realtek Semiconductor Corporation	Realsun Technology Corporatioin	Taiwan	ICs manufacturing, design, research, development, sales, and marketing	5,000	5,000	500,000	100%	5,107	47	47	Subsidiary
Realtek Semiconductor Corporation	Bobitag Inc.	Taiwan	Manufacturing and installation of computer equipment and wholesasle, retail and related services of electronic materials and information/software	19,189	20,000	1,918,910	66.67%	19,398	277	184	Subsidiary
Realtek Semiconductor Corporation	Technology Partner V Venture Capital Corporation	Taiwan	Investment holdings	66,657	84,565	4,178,509	32.43%	22,247	(21,594)	(1,151)	Investments accounted for under equity method
Realtek Semiconductor Corporation	Estinet Technologies Incorporation	Taiwan	Research and development, design, manufacturing, sales and other services of electronic components,information/Software and integrated circuits	110,000	110,000	4,000,000	16.10%	3,701	(57,015)	(5,384)	Investments accounted for under equity method
Realtek Semiconductor Corporation	5VTechnologies, Taiwan Ltd.	Taiwan	Research and development, design, manufacturing, sales and other services of electronic components,information/Software and integrated circuits	46,699	46,699	46,699	24.42%	-	(39,968)	(9,398)	Investments accounted for under equity method

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Information on investees

For the year ended December 31, 2019

Table 8

Expressed in thousands of NTD

(Except as otherwise indicated)

				Initial investment amount		Shares held as at December 31, 2019					
Investor	Investee	Location	Main business activities	Balance as at December 31, 2019	Balance as at December 31, 2018	Number of shares	Ownership (%)	Book value	Net profit (loss) of the investee for the year ended December 31, 2019	Investment income (loss) recognised by the Company for the year ended December 31, 2019	Footnote
Realking Investments Limited	Innorich Venture Capital Corp.	Taiwan	Venture capital activities	$ 200,000	$ 200,000	20,000,000	37.38%	$ 160,023	($ 21,228)	($ 7,900)	Investments accounted for under equity method
Leading Enterprises Limited	Realtek Semiconductor (Japan) Corp.	Japan	ICs deign,sales, and consultancy	5,542	5,568	400	100%	2,483	255	255	Sub-Subsidiary
Leading Enterprises Limited	Circon Universal Inc.	Mauritius	Investment holdings	1,950,869	1,991,498	64,800,000	100%	8,151	6	6	Sub-Subsidiary
Leading Enterprises Limited	Realtek Singapore Private Limited	Singapore	ICs manufacturing, design, research, development, sales, and marketing	1,257,578	1,283,769	9,856,425	10.97%	1,281,046	6,306,957	691,815	Sub-Subsidiary
Amber Universal Inc.	Realtek Semiconductor (HK) Limited	Hong Kong	Information services and technical support	5,799	5,886	-	100%	1,159	(25)	(25)	Sub-Subsidiary
Realtek Singapore Private Limited	Empsonic Enterprises Inc.	Mauritius	Investment holdings	850,495	868,207	2,825,000	100%	1,455,628	98,711	98,711	Sub-Subsidiary
Realtek Singapore Private Limited	Cortina Access Inc.	U.S.A	R&D and information services	1,229,710	1,255,320	16,892	100%	1,025,799	30,063	30,063	Sub-Subsidiary
Realtek Singapore Private Limited	Cortina Systems Taiwan Limited	Taiwan	R&D and technical support	60,212	61,466	21,130,000	100%	61,592	5,371	5,371	Sub-Subsidiary
Realtek Singapore Private Limited	Realtek Viet Nam Co., Ltd.	Vietnam	R&D and technical support	30,106	30,733	1,000,000	100%	19,772	(9,032)	(9,032)	Sub-Subsidiary
Talent Eagle Enterprise Inc.	Ubilinx Technology Inc.	U.S.A	R&D and information services	1,204,240	799,058	40,000,000	100%	41,892	(413,581)	(413,581)	Sub-Subsidiary

Note：The amount of foreign currencies denominated in New Taiwan dollars in this table, which related to income and expenses were re-translated at the average exchange rate from January 1, 2019 to December 31, 2019, others were re-translated at the exchange rate prevailing at the end of the financial reporting period.

REALTEK SEMICONDUCTOR CORPORATION AND SUBSIDIARIES

Information on investments in Mainland China

For the year ended December 31, 2019

Table 9

Expressed in thousands of NTD
(Except as otherwise indicated)

Investee in Mainland China	Main business activities	Paid-in Capital	Investment method (Note1)	Accumulated amount of remittance from Taiwan to Mainland China as of January 1, 2019	Amount remitted from Taiwan to Mainland China/Amount remitted back to Taiwan for the year ended December 31, 2019		Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2019	Net income of investee for the year ended December 31, 2019	Ownership held by the Company (direct or indirect)	Investment income (loss) recognised by the Company for the year ended December 31, 2019 (Note2(2C))	Book value of investment in Mainland China as of December 31, 2019	Accumulated amount of investment income remitted back to Taiwan as of December 31, 2019	Footnote
					Remitted to Mainland China	Remitted back to Taiwan							
Cortina Network Systems Shanghai Co., Ltd.	R&D and technical support	$ 108,382	(2)	$ 108,382	$ -	$ -	$ 108,382	$ 7,476	100%	$ 7,476	$ 96,784	$ -	
Realsil Microelectronics Corp.	R&D and technical support	842,968	(2)	842,968	-	-	842,968	99,574	100%	99,574	1,450,798	-	
Realtek Semiconductor (Shen Zhen) Corp.	R&D and technical support	150,530	(2)	150,530	-	-	150,530	22,194	100%	22,194	253,983	-	
RayMX Microelectronics Corp.	ICs manufacturing, design, research, development, sales, and marketing	113,445	(2)	113,445	-	-	113,445	(28,097)	100%	(28,097)	85,230	-	

Company name	Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2019	Investment amount approved by the Investment Commission of the Ministry of Economic Affairs (MOEA)	Ceiling on investments in Mainland China imposed by the Investment Commission of MOEA
Cortina Network Systems Shanghai Co., Ltd.	$ 108,382	$ 108,382	$ 16,331,391
Realsil Microlectronics Corp.	842,968	842,968	
Realtek Semiconductor (Shan Zhen) Corp.	150,530	150,530	
RayMX Microelectronics Corp.	113,445	113,445	

Note 1: Investment methods are classified into the following three categories; fill in the number of category each case belongs to:
(1) Directly invest in a company in Mainland China.
(2) Through investing in an existing company in the third area, which then invested in the investee in Mainland China.
(3) Others.

Note 2: In the 'Investment income (loss) recognised by the Company for the year ended December 31, 2019' column, except for the financial statements of Cortina Network System Shanghai Co., Ltd. were audited by other independent accountants, the remaining financial statements were audited by the independent accountants of parent company in Taiwan.

Note 3: The amount of foreign currencies denominated in New Taiwan dollars in this table, which related to income and expenses were re-translated at the average exchange rate from January 1, 2019 to December 31, 2019, others were re-translated at the exchange rate prevailing at the end of the financial reporting period.

VI. Parent Company Only Financial Statements

REPORT OF INDEPENDENT ACCOUNTANTS TRANSLATED FROM CHINESE

PWCR19000226

To the Board of Directors and Shareholders of Realtek Semiconductor Corporation

Opinion

We have audited the accompanying parent company only balance sheets of Realtek Semiconductor Corporation (the "Company") as at December 31, 2019 and 2018, and the related parent company only statements of comprehensive income, of changes in equity and of cash flows for the years then ended, and notes to the parent company only financial statements, including a summary of significant accounting policies.

In our opinion, based on our audits and the reports of other independent accountants (please refer to the *Other matter* section of our report), the accompanying parent company only financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers".

Basis for opinion

We conducted our audits in accordance with the "Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants" and generally accepted auditing standards in the Republic of China ("ROC GAAS"). Our responsibilities under those standards are further described in the Independent Accountant's Responsibilities for the Audit of the Parent Company Only Financial Statements section of our report. We are independent of the Company in accordance with the Code of Professional Ethics for Certified Public Accountants in the Republic of China (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. Based on our audits and the reports of the other independent accountants, we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the parent company only financial statements of the current period. These matters were addressed in the context of our audit of the parent company only financial statements as a whole and, in forming our opinion thereon, we do not provide a separate opinion on these matters.

Key audit matters for the Company's parent company only financial statements of the current period are stated as follows:

Valuation of inventories

<u>Description</u>

Refer to Note 4(13) of the parent company only financial statements for inventory valuation policies, Note 5(2) for uncertainty of accounting estimates and assumptions of inventory valuation and Note 6(3) for the details of inventories.

The Company is primarily engaged in researching, developing, manufacturing, selling of various integrated circuits and related application software. Inventories are stated at the lower of cost and net realizable value. Due to the balances of inventories are significant to the financial statements and the rapid technological changes in the industry, there is a higher risk of decline in market value and obsolescence of inventories. Thus, we considered the valuation of inventories as one of the key audit matters.

<u>How our audit addressed the matter</u>

We performed the following audit procedures in respect of the above key audit matter:

1. Obtained an understanding of accounting policies on the provision for inventory valuation losses and assessed the reasonableness.
2. Validated the accuracy of inventory aging report, as well as sampled and confirmed the consistency of quantities and amounts with detailed inventory listing, verified dates of movements with supporting documents and ensured the proper categorization of inventory aging report.
3. Evaluated and confirmed the reasonableness of net realizable value for inventories through validating respective supporting documents.

Other matter – Reference to audits of other independent accountants

We did not audit the financial statements of certain investments accounted for under equity method. Those financial statements were audited by other independent accountants whose reports thereon have been furnished to us, and our opinion expressed herein is based solely on the audit reports of the other independent accountants. Investments accounted for under equity method amounted to NT$6,938,839 thousand and NT$6,900,458 thousand, constituting 10.29% and 12.78% of total assets as of December 31, 2019 and 2018, respectively. Comprehensive income amounted to NT$151,087 thousand and NT$108,408 thousand, constituting 2.46% and 2.14% of total comprehensive income for the years ended December 31, 2019 and 2018, respectively.

Responsibilities of management and those charged with governance for the parent company only financial statements

Management is responsible for the preparation and fair presentation of the parent company only financial statements in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers", and for such internal control as management determines is necessary to enable the preparation of parent company only financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company only financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance, including the Audit Committee, are responsible for overseeing the Company's financial reporting process.

Independent accountant's responsibilities for the audit of the parent company only financial statements

Our objectives are to obtain reasonable assurance about whether the parent company only financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ROC GAAS will always detect a material misstatement when

it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company only financial statements.

As part of an audit in accordance with ROC GAAS, we exercise professional judgement and maintain professional skepticism throughout the audit. We also:

1. Identify and assess the risks of material misstatement of the parent company only financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
2. Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
3. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
4. Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our report to the related disclosures in the parent company only financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our report. However, future events or conditions may cause the Company to cease to continue as a going concern.
5. Evaluate the overall presentation, structure and content of the parent company only financial statements, including the disclosures, and whether the parent company only financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

6. Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the parent company only financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the parent company only financial statements of the current period and are therefore the key audit matters. We describe these matters in our report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Lin, Yu-Kuan　　　　　Tsang, Kwoh-Wah

For and on behalf of PricewaterhouseCoopers, Taiwan

March 20, 2020

The accompanying parent company only financial statements are not intended to present the financial position and results of operations and cash flows in accordance with accounting principles generally accepted in countries and jurisdictions other than the Republic of China. The standards, procedures and practices in the Republic of China governing the audit of such financial statements may differ from those generally accepted in countries and jurisdictions other than the Republic of China. Accordingly, the accompanying parent company only financial statements and report of independent accountants are not intended for use by those who are not informed about the accounting principles or auditing standards generally accepted in the Republic of China, and their applications in practice.

As the financial statements are the responsibility of the management, PricewaterhouseCoopers cannot accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may derive from the translation.

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Assets	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
	Current assets					
1100	Cash and cash equivalents	6(1)	$ 3,333,828	5	$ 1,553,365	3
1110	Financial assets at fair value through profit or loss - current		28,736	-	29,061	-
1136	Financial assets at amortised cost - current	8	-	-	61,401	-
1170	Accounts receivable, net	6(2)	6,588,225	10	4,307,547	8
1180	Accounts receivable, net - related parties	6(2) and 7	1,227,255	2	1,033,782	2
1200	Other receivables		20,417	-	42,641	-
1210	Other receivables - related parties	7	5,729,653	8	2,688,329	5
130X	Inventories, net	6(3)	5,820,326	9	4,096,647	8
1410	Prepayments		205,329	-	149,935	-
11XX	**Total current assets**		22,953,769	34	13,962,708	26
	Non-current assets					
1517	Financial assets at fair value through other comprehensive income - non-current		-	-	936	-
1535	Financial assets at amortised cost - non-current	8	64,885	-	-	-
1550	Investments accounted for under equity method	6(4)	38,503,441	57	35,911,991	67
1600	Property, plant and equipment	6(5)	3,019,258	5	2,863,756	5
1755	Right-of-use assets	6(6)	1,091,607	2	-	-
1780	Intangible assets	6(7)	1,652,722	2	1,160,549	2
1840	Deferred income tax assets	6(21)	114,163	-	78,472	-
1900	Other non-current assets		46,151	-	14,444	-
15XX	**Total non-current assets**		44,492,227	66	40,030,148	74
1XXX	**Total assets**		$ 67,445,996	100	$ 53,992,856	100

(Continued)

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY BALANCE SHEETS
DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Liabilities and Equity	Notes	December 31, 2019 AMOUNT	%	December 31, 2018 AMOUNT	%
	Current liabilities					
2100	Short-term borrowings	6(8)	$ 18,604,770	28	$ 14,526,311	27
2130	Contract liabilities - current	6(15)	67,853	-	110,764	-
2150	Notes payable		3,276	-	8,657	-
2170	Accounts payable		5,659,518	8	3,793,276	7
2180	Accounts payable - related parties	7	313,185	-	228,279	-
2200	Other payables	6(9)	9,929,669	15	6,867,842	13
2220	Other payables - related parties	7	55,690	-	38,283	-
2230	Current income tax liabilities		820,495	1	578,088	1
2280	Lease liabilities - current		30,417	-	-	-
2300	Other current liabilities	6(15)	3,831,860	6	2,581,910	5
21XX	**Total current liabilities**		39,316,733	58	28,733,410	53
	Non-current liabilities					
2550	Provisions - non-current		-	-	519,016	1
2570	Deferred income tax liabilities	6(21)	51,723	-	22,310	-
2580	Lease liabilities - non-current		781,678	2	-	-
2600	Other non-current liabilities	6(10)	76,877	-	80,828	-
25XX	**Total non-current liabilities**		910,278	2	622,154	1
2XXX	**Total liabilities**		40,227,011	60	29,355,564	54
	Equity					
	Share capital	6(11)				
3110	Common shares		5,080,955	7	5,080,955	10
	Capital surplus	6(12)				
3200	Capital surplus		2,736,854	4	3,236,659	6
	Retained earnings	6(13)				
3310	Legal reserve		4,902,176	7	4,467,099	8
3320	Special reserve		-	-	600,443	1
3350	Undistributed earnings		14,716,036	22	10,850,172	20
	Other equity	6(14)				
3400	Other equity interest		(217,036)	-	401,964	1
3XXX	**Total equity**		27,218,985	40	24,637,292	46
	Significant contingent liabilities and unrecognized contract commitments	9				
3X2X	**Total liabilities and equity**		$ 67,445,996	100	$ 53,992,856	100

The accompanying notes are an integral part of these parent company only financial statements.

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars, except earings per share amounts)

			Year ended December 31			
			2019		2018	
	Items	Notes	AMOUNT	%	AMOUNT	%
4000	**Operating revenue**	6(15) and 7	$ 40,845,708	100	$ 32,194,291	100
5000	**Operating costs**	6(3) and 7	(24,643,053)	(60)	(18,906,196)	(59)
5900	**Gross profit**		16,202,655	40	13,288,095	41
	Operating expenses	6(20)(21) and 7				
6100	Selling expenses		(1,887,715)	(5)	(1,646,985)	(5)
6200	General and administrative expenses		(760,391)	(2)	(991,577)	(3)
6300	Research and development expenses		(12,212,926)	(30)	(9,955,350)	(31)
6450	Expected credit gains (losses)	12(2)	(25,618)	-	5,803	-
6000	**Total operating expenses**		(14,886,650)	(37)	(12,588,109)	(39)
6900	**Operating income**		1,316,005	3	699,986	2
	Non-operating income and expenses					
7010	Other income	6(16) and 7	194,391	-	112,353	1
7020	Other gains and losses	6(17)	(191,745)	-	(1,992)	-
7050	Finance costs	6(18)	(144,100)	-	(140,170)	-
7070	Share of profit of associates and joint ventures accounted for under equity method	6(4)	6,053,732	15	3,968,591	12
7000	**Total non-operating income and expenses**		5,912,278	15	3,938,782	13
7900	**Profit before income tax, net**		7,228,283	18	4,638,768	15
7950	Income tax expense	6(21)	(438,000)	(1)	(288,000)	(1)
8200	**Net income for the year**		$ 6,790,283	17	$ 4,350,768	14
	Other comprehensive income, net	6(14)				
	Components of other comprehensive income (loss) that will not be reclassified to profit or loss					
8311	Losses on remeasurements of defined benefit plans		$ -	-	($ 75,809)	-
8316	Unrealised losses from investments in equity instruments measured at fair value through other comprehensive income		-	-	(138)	-
8330	Share of other comprehensive income (loss) of associates and joint ventures accounted for under equity method		231,742	-	(163,544)	(1)
8310	**Total other comprehensive income (loss) that will not be reclassified to profit or loss**		231,742	-	(239,491)	(1)
	Components of other comprehensive income (loss) that will be reclassified to profit or loss					
8380	Share of other comprehensive (loss) income of associates and joint ventures accounted for under equity method		(891,954)	(2)	942,974	3
8360	**Total other comprehensive (loss) income that will be reclassified to profit or loss**		(891,954)	(2)	942,974	3
8300	**Other comprehensive (loss) income for the year**		($ 660,212)	(2)	$ 703,483	2
8500	**Total comprehensive income for the year**		$ 6,130,071	15	$ 5,054,251	16
	Earnings Per Share (in dollars)					
9750	**Basic earnings per share**	6(22)	$	13.36	$	8.57
9850	**Diluted earnings per share**	6(22)	$	13.13	$	8.40

The accompanying notes are an integral part of these parent company only financial statements.

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

				Retained earnings			Other equity interest			
	Notes	Common shares	Capital surplus	Legal reserve	Special reserve	Undistributed earnings	Financial statements translation differences of foreign operations	Unrealised gains (losses) from financial assets measured at fair value through other comprehensive income	Unrealised gain or loss on available-for-sale financial assets	Total equity
2018										
Balance at January 1, 2018		$ 5,065,062	$ 3,558,856	$ 4,127,884	$ -	$ 9,698,159	($ 813,163)	$ -	$ 212,720	$ 21,849,518
Modified retrospective approach adjustment	6(14)	-	-	-	-	103,142	-	435,835	(212,720)	326,257
Balance at January 1 after adjustments		5,065,062	3,558,856	4,127,884	-	9,801,301	(813,163)	435,835	-	22,175,775
Net income for the year		-	-	-	-	4,350,768	-	-	-	4,350,768
Other comprehensive income (loss)	6(14)	-	-	-	-	(75,809)	942,974	(163,682)	-	703,483
Total comprehensive income (loss)		-	-	-	-	4,274,959	942,974	(163,682)	-	5,054,251
Distribution of 2017 earnings	6(13)									
Legal reserve		-	-	339,215	-	(339,215)	-	-	-	-
Special reserve		-	-	-	600,443	(600,443)	-	-	-	-
Cash dividends		-	-	-	-	(2,286,430)	-	-	-	(2,286,430)
Employees' compensation transferred to common stock	6(12)	15,893	163,692	-	-	-	-	-	-	179,585
Cash dividends from capital surplus	6(12)	-	(508,095)	-	-	-	-	-	-	(508,095)
Changes in equity of associates accounted for under equity method	6(12)	-	22,005	-	-	-	-	-	-	22,005
Cash dividends returned	6(12)	-	201	-	-	-	-	-	-	201
Balance at December 31, 2018		$ 5,080,955	$ 3,236,659	$ 4,467,099	$ 600,443	$ 10,850,172	$ 129,811	$ 272,153	$ -	$ 24,637,292
2019										
Balance at January 1, 2019		$ 5,080,955	$ 3,236,659	$ 4,467,099	$ 600,443	$ 10,850,172	$ 129,811	$ 272,153	$ -	$ 24,637,292
Net income for the year		-	-	-	-	6,790,283	-	-	-	6,790,283
Other comprehensive income (loss)	6(14)	-	-	-	-	-	(891,954)	231,742	-	(660,212)
Total comprehensive income (loss)		-	-	-	-	6,790,283	(891,954)	231,742	-	6,130,071
Distribution of 2018 earnings	6(13)									
Legal reserve		-	-	435,077	-	(435,077)	-	-	-	-
Special reserve		-	-	-	(600,443)	600,443	-	-	-	-
Cash dividends		-	-	-	-	(3,048,573)	-	-	-	(3,048,573)
Cash dividend from capital surplus	6(12)	-	(508,095)	-	-	-	-	-	-	(508,095)
Changes in equity of associates accounted for under equity method	6(12)	-	8,064	-	-	-	-	-	-	8,064
Disposal of investments in equity instruments measured at fair value through other comprehensive income	6(14)	-	-	-	-	(41,212)	-	41,212	-	-
Cash dividends returned	6(12)	-	226	-	-	-	-	-	-	226
Balance at December 31, 2019		$ 5,080,955	$ 2,736,854	$ 4,902,176	$ -	$ 14,716,036	($ 762,143)	$ 545,107	$ -	$ 27,218,985

The accompanying notes are an integral part of these parent company only financial statements.

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Notes	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit before tax		$ 7,228,283	$ 4,638,768
Adjustments			
Adjustments to reconcile profit (loss)			
Depreciation	6(19)	562,805	470,049
Amortization	6(19)	948,008	943,734
Expected credit losses (gains)	12(2)	25,618	(5,803)
Impairment loss	6(17)	41,397	-
Interest expense	6(18)	144,100	140,170
Interest income	6(16)	(118,442)	(66,668)
Dividend income	6(16)	(406)	(812)
Loss on financial assets at fair value through profit or loss	6(17)	325	11,283
Share of gain of associates and joint ventures accounted for under equity method	6(4)	(6,053,732)	(3,968,591)
Gain on disposal of property, plant and equipment	6(17)	(92)	-
Other intangible assets transferred to expenses	6(17)	526	7,698
Changes in operating assets and liabilities			
Changes in operating assets			
Accounts receivable, net		(2,304,342)	527,028
Accounts receivable, net - related parties		(195,427)	53,312
Other receivables		27,106	(23,639)
Other receivables, net - related parties		(2,420)	(67,713)
Inventories		(1,723,679)	227,773
Prepayments		(55,394)	97,207
Changes in operating liabilities			
Contract liabilities - current		(42,911)	21,541
Notes payable		(5,381)	26
Accounts payable		1,866,242	10,137
Accounts payable - related parties		84,906	(54,388)
Other payables		3,019,851	1,310,009
Other payables - related parties		17,407	6,126
Provisions - non-current		(519,016)	84,591
Other current liabilities		1,249,950	397,579
Accrued pension obligations		(2,470)	(2,507)

(Continued)

REALTEK SEMICONDUCTOR CORPORATION
PARENT COMPANY ONLY STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Expressed in thousands of New Taiwan dollars)

	Notes	2019	2018
Cash inflow generated from operations		$ 4,192,812	$ 4,756,910
Receipt of interest		113,560	66,401
Receipt of dividends		406	812
Interest paid		(146,526)	(138,304)
Income taxes paid		(201,871)	(48,920)
Net cash flows from operating activities		3,958,381	4,636,899
CASH FLOWS FROM INVESTING ACTIVITIES			
Acquisition of financial assets at amortised cost		(64,885)	-
Proceeds from disposal of financial assets at amortised cost		61,401	30,254
Proceeds from disposal of financial assets at fair value through other comprehensive income		939	-
Proceeds from capital reduction of investee accounted for under equity method	6(4)	17,908	-
Acquisition of cash dividends from investments accounted for under equity method		2,750,826	5,436,741
Acquisition of property, plant and equipment	6(23)	(682,325)	(578,076)
Proceeds from disposal of property, plant and equipment		92	-
Acquisition of intangible assets	6(23)	(1,399,800)	(581,659)
Acquisition of right-of-use assets		(286,276)	-
Increase in other receivables, net - related parties		(3,038,904)	(1,797,119)
Increase in refundable deposits		(1,722)	(7,988)
Increase in other non-current assets		(29,985)	-
Net cash flows (used in) from investing activities		(2,672,731)	2,502,153
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase in short-term borrowings		147,831,650	146,563,258
Decrease in short-term borrowings		(143,753,191)	(150,089,571)
Repayment of principal portion of lease liabilities	6(24)	(25,723)	-
Guarantee deposits returned	6(24)	(1,481)	(304)
Cash dividends paid	6(13)	(3,556,668)	(2,794,525)
Cash dividends returned		226	201
Net cash flows from (used in) financing activities		494,813	(6,320,941)
Net increase in cash and cash equivalents		1,780,463	818,111
Cash and cash equivalents at beginning of year		1,553,365	735,254
Cash and cash equivalents at end of year		$ 3,333,828	$ 1,553,365

The accompanying notes are an integral part of these parent company only financial statements.

REALTEK SEMICONDUCTOR CORPORATION

NOTES TO THE PARENT COMPANY ONLY FINANCIAL STATEMENTS

DECEMBER 31, 2019 AND 2018

(Expressed in thousands of New Taiwan dollars, except as otherwise indicated)

1. HISTORY AND ORGANISATION

Realtek Semiconductor Corporation (the "Company") was incorporated as a company limited by shares on October 21, 1987 and commenced commercial operations in March 1988. The Company was based in Hsinchu Science-Based Industrial Park since October 28, 1989. The Company is engaged in the research, development, design, testing, and sales of ICs and application softwares for these products.

2. THE DATE OF AUTHORISATION FOR ISSUANCE OF THE PARENT COMPANY ONLY FINANCIAL STATEMENTS AND PROCEDURES FOR AUTHORISATION

These parent company only financial statements were authorised for issuance by the Board of Directors on March 20, 2020.

3. APPLICATION OF NEW STANDARDS, AMENDMENTS AND INTERPRETATIONS

(1) Effect of the adoption of new issuances of or amendments to International Financial Reporting Standards ("IFRSs") as endorsed by the Financial Supervisory Commission ("FSC")

New standards, interpretations and amendments endorsed by the FSC effective from 2019 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 9, 'Prepayment features with negative compensation'	January 1, 2019
IFRS 16, 'Leases'	January 1, 2019
Amendments to IAS 19, 'Plan amendment, curtailment or settlement'	January 1, 2019
Amendments to IAS 28, 'Long-term interests in associates and joint ventures'	January 1, 2019
IFRIC 23, 'Uncertainty over income tax treatments'	January 1, 2019
Annual improvements to IFRSs 2015-2017 cycle	January 1, 2019

Except for the following, the above standards and interpretations have no significant impact to the Company's financial condition and financial performance based on the Company's assessment.

IFRS 16, 'Leases'

A. IFRS 16, 'Leases', replaces IAS 17, 'Leases' and related interpretations and SICs. The standard requires lessees to recognize a 'right-of-use asset' and a lease liability (except for those leases with terms of 12 months or less and leases of low-value assets). The accounting stays the same for lessors, which is to classify their leases as either finance leases or operating leases and account for those two types of leases differently. IFRS 16 only requires enhanced disclosures to be provided by lessors.

B. The Company has elected to apply IFRS 16 by not restating the comparative information (referred herein as the 'modified retrospective approach') when applying "IFRSs" effective in 2019 as endorsed by the FSC. Accordingly, the Company increased 'right-of-use asset' by $732,121, increased 'lease liability' by $732,121 with respect to the lease contracts of lessees on January 1, 2019.

C. The Company has used the following practical expedients permitted by the standard at the date of initial application of IFRS 16:

(a) The use of a single discount rate to a portfolio of leases with reasonably similar characteristics.

(b) The exclusion of initial direct costs for the measurement of 'right-of-use asset'.

D. The Company calculated the present value of lease liabilities by using the incremental borrowing interest rate ranging from 0.97% to 1.71%.

E. The Company recognized lease liabilities which had previously been classified as 'operating leases' under the principles of IAS 17, 'Leases'. The reconciliation between operating lease commitments under IAS 17 measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate and lease liabilities recognized as of January 1, 2019 is as follows:

Operating lease commitments disclosed by applying IAS 17 as at December 31, 2018	$ 148,933
Add: Adjustments as a result of a different treatment of extension and termination options	834,929
Total lease contracts amount recognised as lease liabilities by applying IFRS 16 on January 1, 2019	983,862
Incremental borrowing interest rate at the date of initial application	0.97%~1.71%
Lease liabilities recognised as at January 1, 2019 by applying IFRS 16	$ 732,121

(2) Effect of new issuances of or amendments to IFRSs as endorsed by the FSC but not yet adopted by the Company

New standards, interpretations and amendments endorsed by the FSC effective from 2020 are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IAS 1 and IAS 8, 'Disclosure Initiative-Definition of Material'	January 1, 2020
Amendments to IFRS 3, 'Definition of a business'	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS7 ,'Interest rate benchmark reform'	January 1, 2020

The above standards and interpretations have no significant impact to the Company's financial condition and financial performance based on the Company's assessment.

(3) IFRSs issued by IASB but not yet endorsed by the FSC

New standards, interpretations and amendments issued by IASB but not yet included in the IFRSs as endorsed by the FSC are as follows:

New Standards, Interpretations and Amendments	Effective date by International Accounting Standards Board
Amendments to IFRS 10 and IAS 28, 'Sale or contribution of assets between an investor and its associate or joint venture'	To be determined by International Accounting Standards Board
IFRS 17, 'Insurance contracts'	January 1, 2021
Amendments to IAS 1, 'Classification of liabilities as current or non-	January 1, 2022

The above standards and interpretations have no significant impact to the Company's financial condition and financial performance based on the Company's assessment.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these parent company only financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

(1) Compliance statement

The parent company only financial statements of the Company have been prepared in accordance with the "Regulations Governing the Preparation of Financial Reports by Securities Issuers".

(2) Basis of preparation

A. Except for the following items, the parent company only financial statements have been prepared under the historical cost convention:

(a) Financial assets (including derivative instruments) at fair value through profit or loss.

(b) Financial assets at fair value through other comprehensive income.

(c) Defined benefit liabilities recognized based on the net amount of pension fund assets less present value of defined benefit obligation.

B. The preparation of financial statements in conformity with International Financial Reporting Standards, International Accounting Standards, IFRIC Interpretations, and SIC Interpretations as endorsed by the FSC (collectively referred herein as the "IFRSs") requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the parent company only financial statements are disclosed in Note 5.

(3) Foreign currency translation

Items included in the financial statements of each of the Company's entities are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). The parent company only financial statements are presented in New Taiwan dollars, which is the Company's functional and presentation currency.

A. Foreign currency transactions and balances

(a) Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions are recognized in profit or loss in the period in which they arise.

(b) Monetary assets and liabilities denominated in foreign currencies at the period end are re-translated at the exchange rates prevailing at the balance sheet date. Exchange differences arising upon re-translation at the balance sheet date are recognized in profit or loss.

(c) Non-monetary assets and liabilities denominated in foreign currencies held at fair value through profit or loss are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognized in profit or loss. Non-monetary assets and liabilities denominated in foreign currencies held at fair value through other comprehensive income are re-translated at the exchange rates prevailing at the balance sheet date; their translation differences are recognized in other comprehensive income. However, non-monetary assets and liabilities denominated in foreign currencies that are not measured at fair value are translated using the historical exchange rates at the dates of the initial transactions.

(d) All other foreign exchange gains and losses based on the nature of those transactions are presented in the statement of comprehensive income within ‘other gains and losses’.

B. Translation of foreign operations

(a) The operating results and financial position of all the Company entities, associates and joint arrangements that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

i. Assets and liabilities for each balance sheet presented are translated at the closing exchange rate at the date of that balance sheet;

ii. Income and expenses for each statement of comprehensive income are translated at average exchange rates of that period; and

iii. All resulting exchange differences are recognized in other comprehensive income.

(b) When the foreign operation partially disposed of or sold is an associate, exchange differences that were recorded in other comprehensive income are proportionately reclassified to profit or loss as part of the gain or loss on sale. In addition, even when the Company retains partial interest in the former foreign associate after losing significant influence over the former foreign associate, such transactions should be accounted for as disposal of all interest in these foreign operations.

(c) Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing exchange rates at the balance sheet date.

(4) Classification of current and non-current items

A. Assets that meet one of the following criteria are classified as current assets; otherwise they are classified as non-current assets:

(a) Assets arising from operating activities that are expected to be realised, or are intended to be sold or consumed within the normal operating cycle;

(b) Assets held mainly for trading purposes;

(c) Assets that are expected to be realised within twelve months from the balance sheet date;

(d) Cash and cash equivalents, excluding restricted cash and cash equivalents and those that are to be exchanged or used to settle liabilities more than twelve months after the balance sheet date.

Otherwise the Company classified as non-current assets.

B. Liabilities that meet one of the following criteria are classified as current liabilities; otherwise they are classified as non-current liabilities:

(a) Liabilities that are expected to be settled within the normal operating cycle;

(b) Liabilities arising mainly from trading activities;

(c) Liabilities that are to be settled within twelve months from the balance sheet date;

(d) Liabilities for which the repayment date cannot be extended unconditionally to more than twelve months after the balance sheet date. Terms of a liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification.

Otherwise the Company classified as non-current liabilities.

(5) Cash equivalents

Cash equivalents refer to short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. Time deposits that meet the definition above and are held for the purpose of meeting short-term cash commitments in operations are classified as cash equivalents.

(6) Financial assets at fair value through profit or loss

A. Financial assets at fair value through profit or loss are financial assets that are not measured at amortised cost or fair value through other comprehensive income. Financial assets at amortised cost or fair value through other comprehensive income are designated as at fair value through profit or loss at initial recognition when they eliminate or significantly reduce a measurement or recognition inconsistency.

B. On a regular way purchase or sale basis, financial assets at fair value through profit or loss are recognized and derecognized using trade date accounting.

C. At initial recognition, the Company measures the financial assets at fair value and recognizes the transaction costs in profit or loss. The Company subsequently measures the financial assets at fair value, and recognizes the gain or loss in profit or loss.

D. The Company recognizes the dividend income when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Company and the amount of the dividend can be measured reliably.

(7) Financial assets at fair value through other comprehensive income

A. Financial assets at fair value through other comprehensive income comprise equity securities which are not held for trading, and for which the Company has made an irrevocable election at initial recognition to recognize changes in fair value in other comprehensive income.

B. On a regular way purchase or sale basis, financial assets at fair value through other comprehensive income are recognized and derecognized using trade date accounting.

C. At initial recognition, the Company measures the financial assets at fair value plus transaction costs. The Company subsequently measures the financial assets at fair value:

The changes in fair value of equity investments that were recognized in other comprehensive income are reclassified to retained earnings and are not reclassified to profit or loss following the derecognition of the investment. Dividends are recognized as revenue when the right to receive payment is established, future economic benefits associated with the dividend will flow to the Company and the amount of the dividend can be measured reliably.

(8) Financial assets at amortised cost

The Company's time deposits which do not fall under cash equivalents are those with a short maturity period and are measured at initial investment amount as the effect of discounting is immaterial.

(9) Accounts receivable

A. Accounts receivable entitle the Company a legal right to receive consideration in exchange for transferred goods or rendered services.

B. The short-term accounts and notes receivable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

(10) Impairment of financial assets

For financial assets at amortised cost, at each reporting date, the Company recognizes the impairment provision for 12 months expected credit losses if there has not been a significant increase in credit risk since initial recognition or recognizes the impairment provision for the lifetime expected credit losses (ECLs) if such credit risk has increased since initial recognition after taking into consideration all reasonable and verifiable information that includes forecasts. On the other hand, for accounts receivable that do not contain a significant financing component, the Company recognizes the impairment provision for lifetime ECLs.

(11) Derecognition of financial assets

The Company derecognizes a financial asset when the contractual rights to receive the cash flows from the financial asset expire.

(12) Operating leases (lessor)

Lease income from an operating lease (net of any incentives given to the lessee) is recognized in profit or loss on a straight-line basis over the lease term.

(13) Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted-average method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (allocated based on normal operating capacity). It excludes borrowing costs. The item by item approach is used in applying the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and applicable variable selling expenses.

(14) Investments accounted for under equity method / associates

A. Subsidiaries are all entities controlled by the Company. The Company controls an entity when the Company is exposed, or has rights, to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

B. Unrealised profit (loss) occurred from the transactions between the Company and subsidiaries have been offset. The accounting policies of the subsidiaries have been adjusted where necessary to ensure consistency with the policies adopted by the Company.

C. The Company's share of its subsidiaries' post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income. When the Company's share of losses in a subsidiary equals or exceeds its interest in the subsidiary, the Company continues to recognize losses proportionate to its ownership.

D. Associates are all entities over which the Company has significant influence but not control. In general, it is presumed that the investor has significant influence, if an investor holds, directly or indirectly 20 percent or more of the voting power of the investee. Investments in associates are accounted for under equity method and are initially recognized at cost.

E. The Company's share of its associates' post-acquisition profits or losses is recognized in profit or loss, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income. When the Company's share of losses in an associate equals or exceeds its interest in the associate (including any other unsecured receivables), the Company does not recognize further losses, unless it has incurred statutory/constructive obligations or made payments on behalf of the associate.

F. When changes in an associate's equity do not arise from profit or loss or other comprehensive income of the associate and such changes do not affect the Company's ownership percentage of the associate, the Company recognizes the Company's share of change in equity of the associate in 'capital surplus' in proportion to its ownership.

G. Unrealised gains on transactions between the Company and its associates are eliminated to the extent of the Company's interest in the associates. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been adjusted where necessary to ensure consistency with the policies adopted by the Company.

H. In the case that an associate issues new shares and the Company does not subscribe or acquire new shares proportionately, which results in a change in the Company's ownership percentage of the associate but maintains significant influence on the associate, then 'capital surplus' and 'investments accounted for under equity method' shall be adjusted for the increase or decrease of its share of equity interest. If the above condition causes a decrease in the Company's ownership percentage of the associate, in addition to the above adjustment, the amounts previously recognized in other comprehensive income in relation to the associate are reclassified to profit or loss proportionately on the same basis as would be required if the relevant assets or liabilities were disposed of.

I. Upon loss of significant influence over an associate, the Company remeasures any investment retained in the former associate at its fair value. Any difference between fair value and carrying amount is recognized in profit or loss.

J. When the Company disposes its investment in an associate and loses significant influence over this associate, the amounts previously recognized in other comprehensive income in relation to the associate, are reclassified to profit or loss, on the same basis as would be required if the relevant assets or liabilities were disposed of. If it retains significant influence over this associate, the amounts previously recognized in other comprehensive income in relation to the associate are reclassified to profit or loss proportionately in accordance with the aforementioned approach.

K. Pursuant to the "Regulations Governing the Preparation of Financial Reports by Securities Issuers," profit (loss) of the current period and other comprehensive income in the parent company only financial statements shall equal to the amount attributable to owners of the parent in the parent company only financial statements. Owners' equity in the parent company only financial statements shall equal to equity attributable to owners of the parent in the parent company only financial statements.

(15) Property, plant and equipment

A. Property, plant and equipment are initially recorded at cost. Borrowing costs incurred during the construction period are capitalised.

B. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognized. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

C. Other property, plant and equipment apply cost model and are depreciated using the straight-line method to allocate their cost over their estimated useful lives. Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item must be depreciated separately.

D. The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each financial year-end. If expectations for the assets' residual values and useful lives differ from previous estimates or the patterns of consumption of the assets' future economic benefits embodied in the assets have changed significantly, any change is accounted for as a change in estimate under IAS 8, 'Accounting Policies, Changes in Accounting Estimates and Errors', from the date of the change. The estimated useful lives of the fixed assets are as follows: buildings - 10~55 years and other fixed assets - 3~5 years.

(16) <u>Leasing arrangements (lessee)－right-of-use assets/lease liabilities</u>

<u>Effective 2019</u>

A. Leases are recognized as a right-of-use asset and a corresponding lease liability at the date at which the leased asset is available for use by the Company.

B. Lease liabilities include the net present value of the remaining lease payments at the commencement date, discounted using the incremental borrowing interest rate. Fixed payments, less any lease incentives receivable.

The Company subsequently measures the lease liability at amortised cost using the interest method and recognizes interest expense over the lease term. The lease liability is remeasured and the amount of remeasurement is recognized as an adjustment to the right-of-use asset when there are changes in the lease term or lease payments do not arise from contract modifications.

C. At the commencement date, the right-of-use asset is stated at cost comprising the following:

(a) The amount of the initial measurement of lease liability; and

(b) Any lease payments made at or before the commencement date.

The right-of-use asset is measured subsequently using the cost model and is depreciated from the commencement date to the earlier of the end of the asset's useful life or the end of the lease term. When the lease liability is remeasured, the amount of remeasurement is recognized as an adjustment to the right-of-use asset.

(17) <u>Operating leases (lessee)</u>

<u>Applicable for 2018</u>

Payments made under an operating lease (net of any incentives received from the lessor) are recognized in profit or loss on a straight-line basis over the lease term.

(18) Intangible assets

A. Computer software

Computer software is stated at cost and amortised on a straight-line basis over its estimated useful life of 1 to 5 years.

B. Other intangible assets

Separately acquired intangible assets with a finite useful life are stated at cost, net of accumulated amortisation and accumulated impairment. Intangible assets acquired in a business combination are recognized at fair value at acquisition date. The amortisation amounts of separately and parent company only acquired intangible assets were amortised on a straight-line basis over their estimated useful lives of 2-5 years.

(19) Impairment of non-financial assets

The Company assesses at each balance sheet date the recoverable amounts of those assets where there is an indication that they are impaired. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. When the circumstances or reasons for recognising impairment loss for an asset in prior years no longer exist or diminish, the impairment loss is reversed. The increased carrying amount due to reversal should not be more than what the depreciated or amortised historical cost would have been if the impairment had not been recognized.

(20) Borrowings

Borrowings comprise short-term bank borrowings. Borrowings are recognized initially at fair value, net of transaction costs incurred.

(21) Notes and accounts payable

A. Accounts payable are liabilities for purchases of raw materials, goods or services and notes payable are those resulting from operating and non-operating activities.

B. The short-term notes and accounts payable without bearing interest are subsequently measured at initial invoice amount as the effect of discounting is immaterial.

(22) Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability specified in the contract is discharged or cancelled or expires.

(23) Provisions

Provisions are recognized when the Company has a present legal or constructive obligation as a result of past events, and it is probable that an outflow of economic resources will be required to settle the obligation and the amount of the obligation can be reliably estimated. Provisions are measured at the present value of the expenditures expected to be required to settle the obligation on the balance sheet date.

(24) Employee benefits

A. Short-term employee benefits

Short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in respect of service rendered by employees in a period and should be recognized as expense in that period when the employees render service.

B. Pension

(a) Defined contribution plan

For defined contribution plan, the contributions are recognized as pension expense when they are due on an accrual basis. Prepaid contributions are recognized as an asset to the extent of a cash refund or a reduction in the future payments.

(b) Defined benefit plan

i. Net obligation under a defined benefit plan is defined as the present value of an amount of pension benefits that employees will receive on retirement for their services with the Company in current period or prior periods. The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. The net defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The rate used to discount is determined by using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension liability; when there is no deep market in high-quality corporate bonds, the Company uses interest rates of government bonds (at the balance sheet date) instead.

ii. Remeasurements arising on defined benefit plan are recognized in other comprehensive income in the period in which they arise and are recorded as retained earnings.

C. Employees' compensation and directors' remuneration

Employees' compensation and directors' remuneration are recognized as expense and liability, provided that such recognition is required under legal or constructive obligation and those amounts can be reliably estimated. Any difference between the resolved amounts and the subsequently actual distributed amounts is accounted for as changes in estimates. If employee compensation is distributed by shares, the Company calculates the number of shares based on the closing price at the previous day of the Board meeting resolution.

(25) Income tax

A. The tax expense for the period comprises current and deferred tax. Tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or items recognized directly in equity, in which cases the tax is recognized in other comprehensive income or equity.

B. The current income tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in accordance with applicable tax regulations. It establishes provisions where appropriate based on the amounts expected to be paid to the tax authorities. An additional tax is levied on the unappropriated retained earnings and is recorded as income tax expense in the year the stockholders resolve to retain the earnings.

C. Deferred tax is recognized, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the parent company only balance sheet. However, the deferred tax is not accounted for if it arises from initial recognition of goodwill or of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit nor loss. Deferred tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Company and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

D. Deferred tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. At each balance sheet date, unrecognized and recognized deferred tax assets are reassessed.

E. A deferred tax asset shall be recognized for the carryforward of unused tax credits resulting from research and development expenditures to the extent that it is possible that future taxable profit will be available against which the unused tax credits can be utilised.

(26) Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

(27) Dividends

Dividends are recorded in the Company’s financial statements in the period in which they are resolved by the Company’s shareholders. Cash dividends are recorded as liabilities; stock dividends are recorded as stock dividends to be distributed and are reclassified to ordinary shares on the effective date of new shares issuance.

(28) Revenue recognition

A. Sales of goods

(a) The Company manufactures and sells various integrated circuit related products. Sales are recognized when control of the products has transferred, being when the products are delivered to the customers, and there is no unfulfilled obligation that could affect the customer’s acceptance of the products. Delivery occurs when the products have been shipped

to the specific location, the risks of obsolescence and loss have been transferred to the wholesaler, and either the wholesaler has accepted the products in accordance with the sales contract, or the Company has objective evidence that all criteria for acceptance have been satisfied.

(b) Revenue from these sales is recognized based on the price specified in the contract. A refund liability is recognized for expected sales discounts and allowances payable to customers in relation to sales made until the end of the reporting period. As the time interval between the transfer of committed goods or service and the payment of customer does not exceed one year, the Company does not adjust the transaction price to reflect the time value of money.

(c) A receivable is recognized when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

B. Services revenue

Revenue from design, royalty and technical services is recognized after completing the services in which the services are rendered.

5. CRITICAL ACCOUNTING JUDGEMENTS, ESTIMATES AND KEY SOURCES OF ASSUMPTION UNCERTAINTY

The preparation of these parent company only financial statements requires management to make critical judgements in applying the Company's accounting policies and make critical assumptions and estimates concerning future events. Assumptions and estimates may differ from the actual results and are continually evaluated and adjusted based on historical experience and other factors. Such assumptions and estimates have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year; and the related information is addressed below:

(1) Critical judgements in applying the Company's accounting policies

None.

(2) Critical accounting estimates and assumptions

Evaluation of inventories

As inventories are stated at the lower of cost and net realisable value, the Company must determine the net realisable value of inventories on balance sheet date using judgements and estimates. Due to the rapid technology innovation, the Company evaluates the amounts of normal inventory consumption, obsolete inventories or inventories without market selling value on balance sheet date, and writes down the cost of inventories to the net realisable value. Such an evaluation of inventories is principally based on the demand for the products within the specified period in the future. Therefore, there might be material changes to the evaluation.

As of December 31, 2019, the carrying amount of inventories was $5,820,326.

6. DETAILS OF SIGNIFICANT ACCOUNTS

(1) Cash and cash equivalents

	December 31, 2019	December 31, 2018
Cash on hand and revolving funds	$ 654	$ 1,554
Checking accounts and demand deposits	1,827,874	1,551,811
Time deposits	1,505,300	-
	$ 3,333,828	$ 1,553,365

The Company transacts with a variety of financial institutions all with high credit quality to disperse credit risk, so it expects that the probability of counterparty default is remote.

(2) Accounts receivable

	December 31, 2019	December 31, 2018
Accounts receivable	$ 6,655,435	$ 4,351,094
Accounts receivable – related parties	1,239,652	1,044,224
Less: Allowance for bad debts	(79,607)	(53,989)
	$ 7,815,480	$ 5,341,329

A. The aging analysis of accounts receivable is as follows:

	December 31, 2019	December 31, 2018
Not past due	$ 7,518,066	$ 5,386,539
Up to 30 days	376,364	8,743
31 to 90 days	1	-
Over 90 days	656	36
	$ 7,895,087	$ 5,395,318

The above aging analysis is based on past due date.

B. As of December 31, 2019 and 2018, accounts receivable arose from contracts with customers. As of January 1, 2018, the balance of receivables from contracts with customers amounted to $5,915,866.

C. The Company has no accounts receivable pledged to others.

D. Information relating to credit risk of accounts receivable is provided in Note 12(2).

(3) Inventories

	December 31, 2019		
	Cost	Allowance for obsolescence and market value decline	Book value
Raw materials	$ 825,412	($ 26,448)	$ 798,964
Work in process	3,731,699	(312,273)	3,419,426
Finished goods	1,986,572	(384,636)	1,601,936
Total	$ 6,543,683	($ 723,357)	$ 5,820,326

	December 31, 2018					
		Cost	Allowance for obsolescence and market value decline			Book value
Raw materials	$	224,177	($	23,147)	$	201,030
Work in process		2,814,518	(	218,774)		2,595,744
Finished goods		1,640,931	(	341,058)		1,299,873
Total	$	4,679,626	($	582,979)	$	4,096,647

Operating costs incurred on inventories for the years ended December 31, 2019 and 2018 were as follows:

	Years ended December 31,			
		2019		2018
Cost of inventories sold and others	$	24,356,841	$	18,601,009
Loss on market value decline and obsolete and slow-moving inventories		140,378		102,326
Loss on scrap inventory		145,834		202,861
	$	24,643,053	$	18,906,196

(4) Investments accounted for under equity method

		December 31, 2019		December 31, 2018
Subsidiaries:				
Leading Enterprises Limited	$	11,151,040	$	10,903,503
Amber Universal Inc.		3,312,175		3,195,092
Realtek Singapore Private Limited		10,370,572		7,750,098
Realtek Investment Singapore Private Limited		6,494,453		6,427,012
Talent Eagle Enterprise Inc.		2,585,499		2,916,363
Bluocean Inc.		3,479,391		3,440,632
Realsun Investments Co., Ltd.		354,481		437,910
Hung-wei Venture Capital Co., Ltd.		418,438		374,178
Realking Investments Limited		286,939		348,721
Realsun Technology Corporatioin		5,107		5,563
Bobitag Inc.		19,398		19,214
Associates:				
Technology Partner V Venture Capital Corporation		22,247		36,917
5V Technologies, Taiwan Ltd.		-		16,106
Estinet Technologies Incorporation		3,701		40,682
	$	38,503,441	$	35,911,991

A. Subsidiaries

Details of the Company's subsidiaries are provided in Note 4(3) in the Company's 2019 consolidated financial statements.

B. The gain on Investments accounted for under equity method amounted to $6,053,732 and $3,968,591 for the years ended December 31, 2019 and 2018, respectively.

C. The Company's held stocks in Technology Partner V Venture Capital Corporation decreased due to the return of capital in August 2019 and the proceeds from capital returned was $17,908.

D. Certain investments mentioned above have been impaired, and the Company recognized impairment loss amounting to $41,397 for the year ended December 31, 2019.

(5) Property, plant and equipment

	Buildings	Machinery	Test equipment	Office equipment	Others	Total
At January 1, 2019						
Cost	$ 2,574,744	$ 3,694,106	$ 1,899,377	$ 188,464	$ 696,142	$ 9,052,833
Accumulated depreciation and impairment	(878,259)	(3,435,978)	(1,250,013)	(116,837)	(507,990)	(6,189,077)
	$ 1,696,485	$ 258,128	$ 649,364	$ 71,627	$ 188,152	$ 2,863,756
2019						
Opening net book amount	$ 1,696,485	$ 258,128	$ 649,364	$ 71,627	$ 188,152	$ 2,863,756
Additions	-	145,879	391,153	45,469	102,773	685,274
Reclassifications	-	27,167	-	-	(27,167)	-
Depreciation	(92,881)	(73,035)	(286,431)	(23,226)	(54,199)	(529,772)
Closing net book amount	$ 1,603,604	$ 358,139	$ 754,086	$ 93,870	$ 209,559	$ 3,019,258
At December 31, 2019						
Cost	$ 2,574,744	$ 3,863,302	$ 2,281,360	$ 233,933	$ 772,540	$ 9,725,879
Accumulated depreciation and impairment	(971,140)	(3,505,163)	(1,527,274)	(140,063)	(562,981)	(6,706,621)
	$ 1,603,604	$ 358,139	$ 754,086	$ 93,870	$ 209,559	$ 3,019,258

	Buildings	Machinery	Test equipment	Office equipment	Others	Total
At January 1, 2018						
Cost	$ 2,518,099	$ 3,576,741	$ 1,487,712	$ 155,991	$ 663,079	$ 8,401,622
Accumulated depreciation and impairment	(776,967)	(3,351,878)	(1,032,998)	(98,600)	(461,724)	(5,722,167)
	$ 1,741,132	$ 224,863	$ 454,714	$ 57,391	$ 201,355	$ 2,679,455
2018						
Opening net book amount	$ 1,741,132	$ 224,863	$ 454,714	$ 57,391	$ 201,355	$ 2,679,455
Additions	6,238	117,365	414,633	33,630	83,470	655,336
Reclassifications	50,407	-	-	(986)	(50,407)	(986)
Depreciation	(101,292)	(84,100)	(219,983)	(18,408)	(46,266)	(470,049)
Closing net book amount	$ 1,696,485	$ 258,128	$ 649,364	$ 71,627	$ 188,152	$ 2,863,756
At December 31, 2018						
Cost	$ 2,574,744	$ 3,694,106	$ 1,899,377	$ 188,464	$ 696,142	$ 9,052,833
Accumulated depreciation and impairment	(878,259)	(3,435,978)	(1,250,013)	(116,837)	(507,990)	(6,189,077)
	$ 1,696,485	$ 258,128	$ 649,364	$ 71,627	$ 188,152	$ 2,863,756

A. Amount of borrowing costs capitalised as part of property, plant and equipment: None.

B. The Company has no property, plant and equipment pledged to others.

(6) Leasing arrangements－lessee

Effective 2019

A. The Company leases various assets including land and buildings. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose covenants, but leased assets may not be used as security for borrowing purposes.

B. The carrying amount of right-of-use assets and the depreciation charge are as follows:

	December 31, 2019	Year ended December 31, 2019
	Carrying amount	Depreciation charge
Land	$ 1,062,048	$ 20,502
Buildings	29,559	12,531
	$ 1,091,607	$ 33,033

C. For the year ended December 31, 2019, the additions to right-of-use assets was $392,519.

D. The information on profit and loss accounts relating to lease contracts is as follows:

		Year ended December 31, 2019
Items affecting profit or loss		
Interest expense on lease liabilities	$	12,651

E. For the year ended December 31, 2019, the Company's total cash outflow for leases was $38,374.

(7) Intangible assets

	Computer software	Intellectual property	Others	Total
At January 1, 2019				
Cost	$ 3,220,861	$ 3,713,979	$ 3,548	$ 6,938,388
Accumulated amortisation and impairment	(2,725,336)	(3,052,503)	-	(5,777,839)
	$ 495,525	$ 661,476	$ 3,548	$ 1,160,549
2019				
Opening net book amount	$ 495,525	$ 661,476	$ 3,548	$ 1,160,549
Additions	844,689	596,018	-	1,440,707
Transfers	1,800	-	(2,326)	(526)
Amortisation	(568,635)	(379,373)	-	(948,008)
Closing net book amount	$ 773,379	$ 878,121	$ 1,222	$ 1,652,722
At December 31, 2019				
Cost	$ 4,067,350	$ 4,309,997	$ 1,222	$ 8,378,569
Accumulated amortisation and impairment	(3,293,971)	(3,431,876)	-	(6,725,847)
	$ 773,379	$ 878,121	$ 1,222	$ 1,652,722

	Computer software	Intellectual property	Others	Total
At January 1, 2018				
Cost	$ 2,759,363	$ 3,558,380	$ 11,909	$ 6,329,652
Accumulated amortisation and impairment	(2,229,775)	(2,604,330)	-	(4,834,105)
	$ 529,588	$ 954,050	$ 11,909	$ 1,495,547
2018				
Opening net book amount	$ 529,588	$ 954,050	$ 11,909	$ 1,495,547
Additions	460,145	153,503	1,800	615,448
Transfers	1,353	2,096	(10,161)	(6,712)
Amortisation	(495,561)	(448,173)	-	(943,734)
Closing net book amount	$ 495,525	$ 661,476	$ 3,548	$ 1,160,549
At December 31, 2018				
Cost	$ 3,220,861	$ 3,713,979	$ 3,548	$ 6,938,388
Accumulated amortisation and impairment	(2,725,336)	(3,052,503)	-	(5,777,839)
	$ 495,525	$ 661,476	$ 3,548	$ 1,160,549

Details of amortisation on intangible assets are as follows:

	Years ended December 31,	
	2019	2018
Operating costs	$ 4,107	$ 3,907
Operating expenses	943,901	939,827
	$ 948,008	$ 943,734

(8) Short-term borrowings

Type of borrowings	December 31, 2019	Interest rate range	Collateral
Bank borrowings			
Unsecured borrowings	$ 18,604,770	0.71%~1.91%	None

Type of borrowings	December 31, 2018	Interest rate range	Collateral
Bank borrowings			
Unsecured borrowings	$ 14,526,311	0.67%~4.16%	None

Interest expense recognized in profit or loss amounted to $131,449 and $140,170 for the years ended December 31, 2019 and 2018, respectively.

(9) Other payables

	December 31, 2019	December 31, 2018
Accrued salaries	$ 3,574,723	$ 3,043,992
Payable for employees' compensation	3,978,614	1,881,190
Other accrued expenses	1,374,970	965,327
Payables on equipment	113,350	110,401
Payables on software and intellectual property	725,345	684,438
Others	162,667	182,494
	$ 9,929,669	$ 6,867,842

(10) Pension

A. (a) The Company has a defined benefit pension plan in accordance with the Labor Standards Law, covering all regular employees' service years prior to the enforcement of the Labor Pension Act on July 1, 2005 and service years thereafter of employees who chose to continue to be subject to the pension mechanism under the Law. Under the defined benefit pension plan, two units are accrued for each year of service for the first 15 years and one unit for each additional year thereafter, subject to a maximum of 45 units. Pension benefits are based on the number of units accrued and the average monthly salaries and wages of the last 6 months prior to retirement. The Company contributes monthly an amount equal to 2% of the employees' monthly salaries and wages to the retirement fund deposited with Bank of Taiwan, the trustee, under the name of the independent retirement fund committee. Also, the Company would assess the balance in the aforementioned labor pension reserve account by December 31, every year. If the account balance is insufficient to pay the pension calculated by the aforementioned method to the employees expected to qualify for retirement in the

following year, the Company will make contributions for the deficit by next March.

(b) The amounts recognized in the balance sheet are determined as follows:

	December 31, 2019	December 31, 2018
Present value of defined benefit obligations	($ 595,932)	($ 568,382)
Fair value of plan assets	522,312	495,415
Net liability in the balance sheet	($ 73,620)	($ 72,967)

(c) Movement in net defined benefit liabilities are as follows:

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2019			
At January 1	($ 568,382)	$ 495,415	($ 72,967)
Current service cost	(2,709)	-	(2,709)
Interest (expense) income	(6,366)	5,544	(822)
	(577,457)	500,959	(76,498)
Remeasurements:			
Return on plan assets (excluding amounts included in interest income or expense)	-	24,973	24,973
Change in demographic assumptions	(1,283)	-	(1,283)
Change in financial assumptions	(6,415)	-	(6,415)
Experience adjustments	(20,397)	-	(20,397)
	(28,095)	24,973	(3,122)
Pension fund contribution	-	6,000	6,000
Paid pension	9,620	(9,620)	-
At December 31	($ 595,932)	$ 522,312	($ 73,620)

	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liability
Year ended December 31, 2018			
At January 1	($ 536,470)	$ 473,679	($ 62,791)
Current service cost	(2,745)	-	(2,745)
Interest (expense) income	(6,675)	5,927	(748)
	(545,890)	479,606	(66,284)
Remeasurements:			
Return on plan assets (excluding amounts included in interest income or expense)	-	13,319	13,319
Change in demographic assumptions	(1,639)	-	(1,639)
Change in financial assumptions	(8,197)	-	(8,197)
Experience adjustments	(16,166)	-	(16,166)
	(26,002)	13,319	(12,683)
Pension fund contribution	-	6,000	6,000
Paid pension	3,510	(3,510)	-
At December 31	($ 568,382)	$ 495,415	($ 72,967)

(d) The Bank of Taiwan was commissioned to manage the Fund of the Company's defined benefit pension plan in accordance with the Fund's annual investment and utilisation plan and the "Regulations for Revenues, Expenditures, Safeguard and Utilisation of the Labor Retirement Fund" (Article 6: The scope of utilisation for the Fund includes deposit in domestic or foreign financial institutions, investment in domestic or foreign listed, over-the-counter, or private placement equity securities, investment in domestic or foreign real estate securitization products, etc.). With regard to the utilisation of the Fund, its minimum earnings in the annual distributions on the final financial statements shall be no less than the earnings attainable from the amounts accrued from two-year time deposits with the interest rates offered by local banks.

(e) The principal actuarial assumptions used were as follows:

	Years ended December 31,	
	2019	2018
Discount rate	0.8%	1.125%
Future salary increases	5%	5.25%

Future mortality rate was estimated based on the 5th Taiwan Standard Ordinary Experience Mortality Table for the years ended December 31, 2019 and 2018.

Because the main actuarial assumption changed, the present value of defined benefit obligation is affected. The analysis was as follows:

	Discount rate		Future salary increases	
	Increase by 0.25%	Decrease by 0.25%	Increase by 0.25%	Decrease by 0.25%
December 31, 2019				
Effect on present value of defined benefit obligation	$ 16,562	($ 17,221)	($ 16,154)	$ 15,635

	Discount rate		Future salary increases	
	Increase by 0.25%	Decrease by 0.25%	Increase by 0.25%	Decrease by 0.25%
December 31, 2018				
Effect on present value of defined benefit obligation	$ 16,573	($ 17,256)	($ 16,206)	$ 15,665

The sensitivity analysis above is based on one assumption which changed while the other conditions remain unchanged. In practice, more than one assumption may change all at once. The method of analysing sensitivity and the method of calculating net pension liability in the balance sheet are the same.

(f) Expected contributions to the defined benefit pension plans of the Company for the year ending December 31, 2020 amount to $6,000.

(g) As of December 31, 2019, the weighted average duration of the retirement plan is 13 years. The analysis of timing of the future pension payment was as follows:

Within 1 year	$	281,271
2~5 years		112,554
5~10 years		197,517
Over 10 years		36,248
	$	627,590

B. (a) Effective July 1, 2005, the Company has established a defined contribution pension plan (the "New Plan") under the Labor Pension Act (the "Act"), covering all regular employees with R.O.C. nationality. Under the New Plan, the Company contributes monthly an amount based on 6% of the employees' monthly salaries and wages to the employees' individual pension accounts at the Bureau of Labor Insurance. The benefits accrued are paid monthly or in lump sum upon termination of employment.

(b) The pension costs under the defined contribution pension plans of the Company for the years ended December 31, 2019 and 2018 were $244,680 and $223,627, respectively.

(11) Share capital

A. As of December 31, 2019, the Company's authorised capital was $8,900,000, consisting of 890 million shares of ordinary stock (including 80 million shares reserved for employee stock options), and the paid-in capital was $5,080,955 with a par value of $10 (in dollars) per share. All proceeds from shares issued have been collected. The beginning balance and closing balance of the number of the Company's ordinary shares outstanding of the period remain the same as in previous two periods.

Unit : Thousands of shares

	2019	2018
At January 1	508,095	506,506
Employees' compensation transferred to common stock	-	1,589
At December 31	508,095	508,095

B. On January 24, 2002, the Company increased its new common stock and sold its old common stock by issuing 13,924 thousand units of GDRs for cash. Each GDR unit represents 4 common stocks, so the total common stocks issued were 55,694 thousand shares. The Company's GDRs are traded in Luxembourg stock exchange. As of December 31, 2019, the outstanding GDRs were 312 thousand units, or 1,249 thousand shares of common stock, representing 0.25% of the Company's total common stocks.

(12) Capital surplus

Pursuant to the R.O.C. Company Act, capital surplus arising from paid-in capital in excess of par value on issuance of common stocks and donations can be used to cover accumulated deficit or to issue new stocks or cash to shareholders in proportion to their share ownership, provided that the Company has no accumulated deficit. Further, the R.O.C. Securities and Exchange Act requires that the amount of capital surplus to be capitalised mentioned above should not exceed 10% of the paid-in capital each year. Capital surplus should not be used to cover accumulated deficit unless the legal reserve is insufficient.

	2019			
	Share premium	Change in associates accounted for under equity method	Others	Total
At January 1	$ 3,196,250	$ 40,208	$ 201	$ 3,236,659
Change in associates accounted for under equity method	-	8,064	-	8,064
Cash dividends distribution from capital surplus	(508,095)	-	-	(508,095)
Cash dividends returned	-	-	226	226
At December 31	$ 2,688,155	$ 48,272	$ 427	$ 2,736,854

	2018			
	Share premium	Change in associates accounted for under equity method	Others	Total
At January 1	$ 3,540,653	$ 18,203	$ -	$ 3,558,856
Change in associates accounted for under equity method	-	22,005	-	22,005
Cash dividends distribution from capital surplus	(508,095)	-	-	(508,095)
Employees' compensation tranferred to common stock	163,692	-	-	163,692
Cash dividends returned	-	-	201	201
At December 31	$ 3,196,250	$ 40,208	$ 201	$ 3,236,659

(13) Retained earnings

A. Under the Company’s Articles of Incorporation, the current year’s earnings, if any, shall first be used to pay all taxes and offset prior years’ operating losses and then 10% of the remaining amount shall be set aside as legal reserve, if legal reserve has accumulated to an amount equal to the paid-in capital, then legal reserve is not required to be set aside any more. After that, special reserve shall be set aside or reversed in accordance with related laws or the regulations

made by the Competent Authority. The remainder, if any, along with prior year's accumulated undistributed earnings shall be proposed by the Board of Directors. However, the appropriations of earnings shall be resolved by shareholders if earnings are distributed by issuing new shares, or the appropriations of earnings shall be resolved by the Board of Directors, if earnings are distributed in the form of cash. The Company should consider factors of finance, business and operations to appropriate distributable earnings for the period, and appropriate all or partial reserve in accordance with regulations and the Company's future expansion plans and future cash flows. In accordance with the Company's dividend policy, cash dividends shall account for at least 10% of the total dividends distributed.

In accordance with Company Act Article 240, Items 5 and Article 241, Item 2, the resolution, for all or partial of distributed dividends, legal reserve and capital surplus are distributed in the form of cash, will be adopted by a majority vote at a meeting of the Board of Directors attended by two-thirds of the total number of directors, and will be reported to the shareholders.

B. Except for covering accumulated deficit or issuing new stocks or cash to shareholders in proportion to their share ownership, the legal reserve shall not be used for any other purpose. The use of legal reserve for the issuance of stocks or cash to shareholders in proportion to their share ownership is permitted, provided that the distribution of the reserve is limited to the portion in excess of 25% of the Company's paid-in capital.

C. In accordance with the regulations, the Company shall set aside special reserve from the debit balance on other equity items at the balance sheet date before distributing earnings. When debit balance on other equity items is reversed subsequently, the reversed amount could be included in the distributable earnings.

D. The appropriations of 2018 and 2017 earnings had been resolved at the stockholders' meeting on June 12, 2019 and June 5, 2018, respectively. Details are summarised below:

	2018		2017	
	Amount	Dividends per share (in dollars)	Amount	Dividends per share (in dollars)
Legal reserve	$ 435,077	$ -	$ 339,215	$ -
(Reversal of) Special reserve	(600,443)	-	600,443	-
Cash dividends	3,048,573	6.00	2,286,430	4.50
	$ 2,883,207	$ 6.00	$ 3,226,088	$ 4.50

E. On June 12, 2019 and June 5, 2018, the stockholders resolved during their meeting to distribute $508,095 by cash ($1 per share) and $508,095 by cash ($1 per share) from additional paid-in capital in excess of par, ordinary share, respectively.

F. For the information relating to employees' compensation and directors' remuneration, please refer to Note 6(20).

(14) Other equity items

	2019		
	Unrealised gains (losses) on valuation	Currency translation difference	Total
At January 1	$ 272,153	$ 129,811	$ 401,964
Revaluation			
–Group	227,352	-	227,352
–Associates	4,390	-	4,390
–Reclassified to reatained earnings	41,212	-	41,212
Currency translation differences:			
–Group	-	(891,954)	(891,954)
At December 31	$ 545,107	($ 762,143)	($ 217,036)

	2018			
	Unrealised gains (losses) on valuation	Available-for-sale investment	Currency translation difference	Total
At January 1	$ -	$ 212,720	($ 813,163)	($ 600,443)
Modified retrospective approach adjustment:				
Revaluation	538,977	(212,720)	-	326,257
Revaluation transferred to retained earnings	(103,142)	-	-	(103,142)
Revaluation				
–Group	(165,659)	-	-	(165,659)
–Associates	1,977	-	-	1,977
Currency translation differences:				
–Group	-	-	942,974	942,974
At December 31	$ 272,153	$ -	$ 129,811	$ 401,964

(15) Operating revenue

	Years ended December 31,	
	2019	2018
Revenue from contracts with customers	$ 40,845,708	$ 32,194,291

A. Disaggregation of revenue from contracts with customers

The Company derives revenue from the transfer of goods and services at a point in time in the following major product lines:

Year ended December 31, 2019	Integrated circuit products	Others	Total
Revenue from external customer contracts	$ 40,729,445	$ 116,263	$ 40,845,708
Timing of revenue recognition			
At a point in time	$ 40,729,445	$ 116,263	$ 40,845,708

Year ended December 31, 2018	Integrated circuit products	Others	Total
Revenue from external customer contracts	$ 32,125,500	$ 68,791	$ 32,194,291
Timing of revenue recognition			
At a point in time	$ 32,125,500	$ 68,791	$ 32,194,291

B. Contract liabilities

The Company has recognized the following revenue-related contract liabilities:

	December 31, 2019	December 31, 2018	January 1, 2018
Contract liabilities – advance sales receipts	$ 67,853	$ 110,764	$ 89,223

Revenue recognized that was included in the contract liability balance at the beginning of the period:

	Years ended December 31,	
	2019	2018
Contract liabilities – advance sales receipts	$ 100,804	$ 77,338

C. Refund liabilities (shown in other current liabilities)

The Company estimates the discounts based on accumulated experience. The estimation is subject to an assessment at each reporting date.

	December 31, 2019	December 31, 2018
Refund liabilities – current	$ 3,831,860	$ 2,581,910

(16) Other income

	Years ended December 31, 2019	Years ended December 31, 2018
Interest income:		
Interest income from bank deposits	$ 42,689	$ 22,694
Other interest income	75,753	43,974
Total interest income	118,442	66,668
Rent income	12,865	20,636
Dividend income	406	812
Grant income	44,434	14,814
Other income	18,244	9,423
	$ 194,391	$ 112,353

(17) Other gains and losses

	Years ended December 31, 2019	Years ended December 31, 2018
Gains on disposal of property, plant and equipment	$ 92	$ -
Net currency exchanges (losses) gains	(145,314)	14,331
Losses on financial assets at fair value through profit or loss	(325)	(11,283)
Impairment loss of investments accounted for under equity method	(41,397)	-
Other losses	(4,801)	(5,040)
	($ 191,745)	($ 1,992)

(18) Finance costs

	Years ended December 31, 2019	Years ended December 31, 2018
Interest expense		
Bank borrowings	$ 131,449	$ 140,170
Lease liabilities	12,651	-
	$ 144,100	$ 140,170

(19) Expenses by nature

	Years ended December 31, 2019	Years ended December 31, 2018
Employee benefit expenses	$ 11,303,979	$ 8,731,937
Depreciation	$ 562,805	$ 470,049
Amortisation	$ 948,008	$ 943,734

(20) Employee benefit expenses

	Years ended December 31, 2019		Years ended December 31, 2018	
Wages and salaries	$	10,471,633	$	7,985,523
Labor and health insurance fees		410,720		364,845
Pension costs		248,211		227,120
Other personnel expenses		173,415		154,449
	$	11,303,979	$	8,731,937

A. In accordance with the Company's Articles of Incorporation, the Company shall appropriate no higher than 3% for directors' remuneration and no less than 1% for employees' compensation, if the Company generates profit. If the Company has accumulated deficit, earnings should be reserved to cover losses before the appropriation of directors' remuneration and employees' compensation. Aforementioned employees' compensation could be distributed by cash or stocks. Specifics of the compensation are to determined by a majority vote at a meeting of the Board of Directors attended by two-thirds of the number of directors. The resolution should be reported to the shareholders during the shareholders' meeting.

B. For the years ended December 31, 2019 and 2018, employees' compensation was accrued at $2,097,424 and $1,151,674 , respectively; directors' remuneration was accrued at $119,828 and $76,778 , respectively. If the estimated amounts differ from the actual distribution resolved by the Board of Directors and the shareholders' meeting, the Company will recognize the change as an adjustment to income of next year.

   Employees' cash compensation was $1,151,674, and directors' remuneration was $76,778 for 2018. Employees' compensation and directors' remuneration for 2018 as resolved at the meeting of the Board of Directors were in agreement with those amounts recognized in the 2018 financial statements.

   Information about employees' compensation and directors' remuneration of the Company as resolved by the Board of Directors will be posted in the "Market Observation Post System" at the website of the Taiwan Stock Exchange.

(21) Income tax

A. Income tax expense

	Years ended December 31, 2019	Years ended December 31, 2018
Current income tax:		
Current income tax on profits for the year	$ 388,600	$ 445,349
Income tax on undistributed earnings	74,745	16,607
Prior year income tax over estimation	(19,067)	(35,671)
Total current income tax	444,278	426,285
Deferred income tax:		
Origination and reversal of temporary differences	(6,278)	(12,360)
Impact of change in tax rate	-	(125,925)
Total deferred income tax	(6,278)	(138,285)
Income tax expense	$ 438,000	$ 288,000

B. Reconciliation between income tax expense and accounting profit

	Years ended December 31, 2019	Years ended December 31, 2018
Income tax calculated based on income before tax and statutory tax rate	$ 1,445,657	$ 927,754
Expenses disallowed by tax regulation and effects from tax-exempt income	(1,063,335)	(494,765)
Impact of change in tax rate	-	(125,925)
Prior year income tax over estimation	(19,067)	(35,671)
Income tax on undistributed surplus earnings	74,745	16,607
Income tax expense	$ 438,000	$ 288,000

C. Amounts of deferred income tax assets or liabilities as a result of temporary differences are as follows:

	Year ended December 31, 2019		
	January 1	Recognised in profit or loss	December 31
Deferred income tax assets:			
-Temporary differences:			
Unrealised loss on market price decline and obsolete and slow-moving inventories and others	$ 78,472	$ 35,691	$ 114,163
Deferred income tax liabilities:			
-Temporary differences:			
Unrealised exchange gain	(22,310)	(29,413)	(51,723)
	$ 56,162	$ 6,278	$ 62,440

	Year ended December 31, 2018		
	January 1	Recognised in profit or loss	December 31
Deferred income tax assets:			
-Temporary differences:			
Unrealised loss on market price decline and obsolete and slow-moving inventories and others	$ 65,551	$ 12,921	$ 78,472
Deferred income tax liabilities:			
-Temporary differences:			
Unrealised exchange gain	(21,749)	(561)	(22,310)
	$ 43,802	$ 12,360	$ 56,162

D. The amounts of deductible temporary differences that were not recognized as deferred income tax assets are as follows:

	December 31, 2019	December 31, 2018
Deductible temporary differences	$ 1,108,747	$ 783,339

E. The Company's income tax returns through 2017 have been assessed and approved by the Tax Authority.

F. Under the amendments to the Income Tax Act which was promulgated by the President of the Republic of China on February 7, 2018, the Company's applicable income tax rate was raised from 17% to 20% effective from January 1, 2018. The Company has assessed the impact of the change in income tax rate.

(22) Earnings per share

Effective January 1, 2008, as employees' compensation could be distributed in the form of stock, the diluted EPS computation shall include those estimated shares that would be increased from employees' stock compensation issuance in the weighted-average number of common shares outstanding during the reporting year, which take into account the dilutive effects of stock bonus on potential common shares. Whereas, basic EPS shall be calculated based on the weighted-average number of common shares outstanding during the reporting year that include the shares of employees' stock compensation for the appropriation of prior year earnings, which have already been resolved at the stockholders' meeting held in the reporting year. Since capitalisation of employees' compensation no longer belongs to distribution of stock dividends, the calculation of basic EPS and diluted EPS for all periods presented shall not be adjusted retroactively.

	Year ended December 31, 2019		
	Amount after tax	Weighted average number of ordinary shares outstanding (shares in thousands)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders	$ 6,790,283	508,095	$ 13.36
Diluted earnings per share			
Profit attributable to ordinary shareholders	$ 6,790,283	508,095	
Assumed conversion of all dilutive potential ordinary shares			
Employees' compensation	-	8,926	
Profit attributable to ordinary shareholders plus assumed conversion of all dilutive potential ordinary shares	$ 6,790,283	517,021	$ 13.13

	Year ended December 31, 2018		
	Amount after tax	Weighted average number of ordinary shares outstanding (shares in thousands)	Earnings per share (in dollars)
Basic earnings per share			
Profit attributable to ordinary shareholders	$ 4,350,768	507,712	$ 8.57
Diluted earnings per share			
Profit attributable to ordinary shareholders	$ 4,350,768	507,712	
Assumed conversion of all dilutive potential ordinary shares			
Employees' compensation	-	10,477	
Profit attributable to ordinary shareholders plus assumed conversion of all dilutive potential ordinary shares	$ 4,350,768	518,189	$ 8.40

(23) Supplemental cash flow information

Investing activities with partial cash payments

	Years ended December 31,	
	2019	2018
Purchase of property, plant and equipment	$ 685,274	$ 655,336
Add: Opening balance of payable on equipment	110,401	33,141
Less: Ending balance of payable on equipment	(113,350)	(110,401)
Cash paid during the year	$ 682,325	$ 578,076

	Years ended December 31,	
	2019	2018
Purchase of intangible assets	$ 1,440,707	$ 615,448
Add: Opening balance of payable on software and intellectual property	684,438	650,649
Less: Ending balance of payable on software and intellectual property	(725,345)	(684,438)
Cash paid during the year	$ 1,399,800	$ 581,659

(24) Changes in liabilities from financing activities

	Short-term borrowings	Refundable deposits received	Lease liabilities	Liabilities from financing activities-gross
At January 1, 2019	$ 14,526,311	$ 4,739	$ 732,121	$ 14,531,050
Changes in cash flow from financing activities	4,078,459	(1,481)	(25,723)	4,051,255
Interest paid	-	-	(12,651)	(12,651)
Interest on lease liabilities	-	-	12,651	12,651
Changes in other non-cash items	-	-	105,697	105,697
At December 31, 2019	$ 18,604,770	$ 3,258	$ 812,095	$ 19,420,123

	Short-term borrowings	deposits received	Liabilities from financing activities-gross
At January 1, 2018	$ 18,052,624	$ 5,043	$ 18,057,667
Changes in cash flow from financing activities	(3,526,313)	(304)	(3,526,617)
At December 31, 2018	$ 14,526,311	$ 4,739	$ 14,531,050

7. RELATED PARTY TRANSACTIONS

(1) Names of related parties and relationship

Names of related parties	Relationship with the Company
Leading Enterprises Limited	Subsidiary
Realtek Singapore Private Limited	Subsidiary
Bluocean Inc.	Subsidiary
Talent Eagle Enterprise Inc.	Subsidiary
Amber Universal Inc.	Subsidiary
Cortina Systems Taiwan Limited	Sub-subsidiary
RayMX Microelectronics Corp.	Sub-subsidiary
G.M.I Technology Inc.	Other related party
Actions Semiconductor Co., Ltd.	Other related party
C-Media Electronics Inc.	Other related party
Greatek Electronics Inc.	Other related party
EmBestor Technology Inc.	Other related party

(2) Significant related party transactions and balances

A. Operating revenue

	Years ended December 31, 2019	2018
Sales of goods：		
G.M.I Technology Inc.	$ 5,996,976	$ 4,888,451
Others	269,079	427,950
	$ 6,266,055	$ 5,316,401

Goods are sold based on the price lists in force and terms that would be available to third parties, and the general collection term was 30 ~ 60 days after monthly billings.

B. Processing cost

	Years ended December 31, 2019	2018
Greatek Electronics Inc.	$ 1,024,163	$ 887,456

Processing cost is paid to associates on normal commercial terms and conditions, and the general payment term was 69 days after monthly billings.

C. Receivables from related parties

	December 31, 2019	December 31, 2018
Accounts receivable：		
G.M.I Technology Inc.	$ 1,172,793	$ 980,790
Others	54,462	52,992
	$ 1,227,255	$ 1,033,782

Aforementioned receivables were 30 ~ 60 days after monthly billings. The receivables from related parties arise mainly from sale transactions. The receivables bear no interest.

D. Payables to related parties:

	December 31, 2019	December 31, 2018
Accounts payable：		
Greatek Electronics Inc.	$ 313,185	$ 228,279

The payment term above was 69 days after monthly billings. The payables to related parties arise mainly from processing cost. The payables are unsecured in nature and bear no interest.

E. Other transactions and other (receivables) payables:

	Years ended December 31,			
	2019		2018	
	Amount	Ending balance	Amount	Ending balance
Other related parties-				
Sales commissions	$ 227,843	$ 55,690	$ 206,978	$ 38,283
Technical royalty revenue	($ 4,430)	$ -	($ 7,799)	$ -
Cash dividend income	($ 406)	$ -	($ 812)	$ -
Subsidiaries and sub-subsidiaries-				
Interest income	($ 70,752)	($ 44,587)	($ 43,612)	($ 41,149)
Other income	$ -	($ 48,980)	($ 50,000)	($ 50,000)
Cash dividend income	($ 2,750,826)	$ -	($ 2,745,981)	$ -
Rent income	($ 1,922)	($ 243)	($ 1,883)	($ 241)

The payment term above was 49 days after monthly billings; collection term was 30 ~ 60 days after monthly billings.

F. Loans to related parties:

Loans to related parties:

(a) Outstanding balance:

	December 31, 2019	December 31, 2018
Subsidiaries		
Leading Enterprises Limited	$ 1,806,360	$ 365,921
Talent Eagle Enterprise Inc.	1,737,116	1,628,849
Bluocean Inc.	1,490,247	602,367
Amber Universal Inc.	602,120	-
	$ 5,635,843	$ 2,597,137

(b) Interest income

	Year ended December,	
	2019	2018
Subsidiaries	$ 70,752	$ 43,612

The loans to subsidiaries are repayable monthly over 1 year and carry interest at 1.8% and 3.3% for the years ended December 31, 2019 and 2018, respectively.

G. Endorsements and guarantees provided to related parties:

	December 31, 2019	December 31, 2018
Subsidiaries	$ 9,798,836	$ 10,106,104

(3) Key management compensation

	Years ended December 31,	
	2019	2018
Salaries and other short-term employee benefits	$ 120,242	$ 105,676
Post-employment benefits	2,697	2,557
Total	$ 122,939	$ 108,233

8. PLEDGED ASSETS

The Company's assets pledged as collateral are as follows:

	Book value		
Pledged asset	December 31, 2019	December 31, 2018	Purposes
Time deposits (shown in financial assets at amortised cost - current)	$ -	$ 30,270	Guarantee for customs duties for the importation of materials
"	-	31,131	Guarantee for leasing land and office in Science Park
Time deposits (shown in financial assets at amortised cost - non-current)	34,307	-	Guarantee for customs duties for the importation of materials
"	30,578	-	Guarantee for leasing land and office in Science Park
	$ 64,885	$ 61,401	

9. SIGNIFICANT CONTINGENT LIABILITIES AND UNRECOGNIZED CONTRACT COMMITMENTS

(1) Contingencies

None.

(2) Operating lease agreements

Applicable for 2018

The Company leases lands and office buildings for operational needs under non-cancellable operating lease agreements. The lease terms are between 2019 and 2027. Most of the lease agreements are renewable at the market price at the end of the lease period. The Company recognized rental expense of $28,434 for these leases in profit or loss for the year ended December 31, 2018.

The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

		December 31, 2018
No later than one year	$	24,761
Later than one year but not later than five years		84,262
Later than five years		39,910
	$	148,933

10. SIGNIFICANT DISASTER LOSS

None.

11. SIGNIFICANT EVENTS AFTER THE BALANCE SHEET DATE

On February 21, 2020, the Board of Directors resolved at their meeting to enter into a property purchase contract, obtaining property in Zhongshan District, Taipei from Huaku Development Co., Ltd. with the transaction amount of 730 million NT dollars.

12. OTHERS

(1) Capital management

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order to provide returns for shareholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Company may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

Financial instruments

A. Financial instruments by category

		December 31, 2019		December 31, 2018
Financial assets				
Financial assets at fair value through profit or loss				
Financial assets mandatorily measured at fair value through profit or loss	$	28,736	$	29,061
Financial assets at fair value through other comprehensive income				
Designation of equity instrument	$	-	$	936
Financial assets at amortised cost/Receivables				
Cash and cash equivalents	$	3,333,828	$	1,553,365
Financial assets at amortised cost		64,885		61,401
Accounts receivable (including related parties)		7,815,480		5,341,329
Other receivables (including related parties)		5,750,070		2,730,970
Refundable deposits		16,166		14,444
	$	16,980,429	$	9,701,509

		December 31, 2019		December 31, 2018
Financial liabilities				
Financial liabilities at amortised cost				
Short-term borrowings	$	18,604,770	$	14,526,311
Notes payable		3,276		8,657
Accounts payable (including related parties)		5,972,703		4,021,555
Other accounts payable (including related parties)		9,985,359		6,906,125
Refundable deposits received		3,258		4,739
Other financial liability		3,831,860		2,581,910
	$	38,401,226	$	28,049,297
Lease liability	$	812,095	$	-

B. Financial risk management policies

(a) The Company's activities expose it to a variety of financial risks: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk.

(b) Risk management is carried out by a finance division (Company finance) under policies approved by the Board of Directors. Company finance identifies, evaluates and hedges financial risks in close cooperation with the Company's operating units.

C. Significant financial risks and degrees of financial risks

(a) Market risk

Foreign exchange risk

i. The Company operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the USD. Foreign exchange risk arises from future commercial transactions, recognized assets and liabilities and net investments in foreign operations.

ii. Management has set up a policy to require the Company to manage its foreign exchange risk against its functional currency. The Company is required to hedge its entire foreign exchange risk exposure with the Company finance.

iii. The Company's businesses involve some functional currency operations (the Company's and certain subsidiaries' functional currency: NTD). The information on assets and liabilities denominated in foreign currencies whose values would be materially affected by the exchange rate fluctuations is as follows:

	December 31, 2019				
	Foreign currency amount (In thousands)		Exchange rate	Book value (NTD)	
(Foreign currency: functional currency)					
Financial assets					
Monetary items					
USD:NTD	$	549,291	30.106	$	16,536,969
Investments accounted for under equity method					
USD:NTD		1,285,500	30.106		38,701,252
Financial liabilities					
Monetary items					
USD:NTD		220,816	30.106		6,647,887

	December 31, 2018				
	Foreign currency amount (In thousands)		Exchange rate	Book value (NTD)	
(Foreign currency: functional currency)					
Financial assets					
Monetary items					
USD:NTD	$	234,227	30.733	$	7,198,500
Investments accounted for under equity method					
USD:NTD		1,159,786	30.733		35,643,714
Financial liabilities					
Monetary items					
USD:NTD		134,264	30.733		4,126,322

The total exchange (loss) gain, including realised and unrealised arising from significant foreign exchange variation on the monetary items held by the Company for the years ended December 31, 2019 and 2018, amounted to ($145,314) and $14,331, respectively. Analysis of foreign currency market risk arising from significant foreign exchange variation:

	Year ended December 31, 2019		
	Sensitivity analysis		
	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	1%	$ 165,370	$ -
Investments accounted for under equity method			
USD:NTD	1%	-	387,013
Financial liabilities			
Monetary items			
USD:NTD	1%	(66,479)	-

	Year ended December 31, 2018		
	Sensitivity analysis		
	Degree of variation	Effect on profit or loss	Effect on other comprehensive income
(Foreign currency: functional currency)			
Financial assets			
Monetary items			
USD:NTD	1%	$ 71,985	$ -
Investments accounted for under equity method			
USD:NTD	1%	-	356,437
Financial liabilities			
Monetary items			
USD:NTD	1%	(41,263)	-

Price risk

i. The Company’s equity securities, which are exposed to price risk, are the held financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income.

ii. The Company's investments in equity securities comprise domestic listed and unlisted stocks. The prices of equity securities would change due to the change of the future value of investee companies. If the prices of these equity securities had decreased/increased by 10% with all other variables held constant, post-tax profit for the years ended December 31, 2019 and 2018 would have decreased/increased by $2,874 and $2,906, respectively, as a result of gains/losses on equity securities classified as at fair value through profit or loss. Other components of equity would have decreased/increased by $0 and $94, respectively, as a result of gains/losses on equity securities classified as equity investment at fair value through other comprehensive income.

Cash flow and fair value interest rate risk

The Company has no material interest rate risk.

(b) Credit risk

i. Credit risk refers to the risk of financial loss to the Company arising from default by the clients or counterparties of financial instruments on the contract obligations. The main factor is that counterparties could not repay in full the accounts receivable based on the agreed terms, and the contract cash flows of financial assets at amortised cost, at fair value through profit or loss and at fair value through other comprehensive income.

ii. The Company manages their credit risk taking into consideration the entire Company's concern. According to the Company's credit policy, the Company is responsible for managing and analysing the credit risk for each of their new clients before standard payment and delivery terms and conditions are offered. Internal risk control assesses the credit quality of the customers, taking into account their financial position, past experience and other factors.

iii. The Company adopts the assumption under IFRS 9, that is, the default occurs when the contract payments are past due over 90 days.

iv. The Company adopts the following assumption under IFRS 9 to assess whether there has been a significant increase in credit risk on that instrument since initial recognition:

If the contract payments were past due over 30 days based on the terms, there has been a significant increase in credit risk on that instrument since initial recognition.

v. The following indicators are used to determine whether the credit impairment of debt instruments has occurred:

(i) It becomes probable that the issuer will enter bankruptcy or other financial reorganization due to their financial difficulties;

(ii) The disappearance of an active market for that financial asset because of financial difficulties;

(iii) Default or delinquency in interest or principal repayments;

(iv) Adverse changes in national or regional economic conditions that are expected to cause a default.

vi. The Company classifies customers' accounts receivable in accordance with customer types. The Company applies the modified approach using provision matrix to estimate expected credit loss under the provision matrix basis.

vii. The Company wrote-off the financial assets, which cannot be reasonably expected to be recovered, after initiating recourse procedures. However, the Company will continue executing the recourse procedures to secure their rights.

viii. The Company used the forecast ability of semiconductor industry research report to adjust historical and timely information to assess the default possibility of accounts receivable. On December 31, 2019 and 2018, the provision matrix is as follows:

	Not past due	1~90 days past due	90 days past due	Total
At December 31, 2019				
Expected loss rate	1%	1%	100%	
Total book value	$ 7,518,066	$ 376,365	$ 656	$ 7,895,087
Loss allowance	$ 75,187	$ 3,764	$ 656	$ 79,607

	Not past due	1~90 days past due	90 days past due	Total
At December 31, 2018				
Expected loss rate	1%	1%	100%	
Total book value	$ 5,386,539	$ 8,743	$ 36	$ 5,395,318
Loss allowance	$ 53,866	$ 87	$ 36	$ 53,989

ix. Movements in relation to the Company applying the modified approach to provide loss allowance for accounts receivable are as follows:

	2019 Loss allowance for accounts receivable
At January 1	$ 53,989
Provision for impairment	25,618
At December 31	$ 79,607

	2018 Loss allowance for accounts receivable
At January 1	$ 59,792
Reversal of impairment loss	(5,803)
At December 31	$ 53,989

x. For financial assets at amortised cost, the credit rating levels are presented below:

	December 31, 2019			
		Lifetime		
	12 months	Significant increase in credit risk	Impairment of credit	Total
Financial assets at amortised cost	$ 64,885	$ -	$ -	$ 64,885

	December 31, 2018			
		Lifetime		
	12 months	Significant increase in credit risk	Impairment of credit	Total
Financial assets at amortised cost	$ 61,401	$ -	$ -	$ 61,401

The financial assets at measured cost are bank time deposits with original maturity more than three months, and there is no major material in credit risk assessment.

(c) Liquidity risk

i. Cash flow forecasting is performed in the operating entities of the Company and aggregated by Company finance. Company finance monitors rolling forecasts of the Company's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities.

ii. Company finance invests surplus cash in interest bearing current accounts, time deposits, money market deposits and marketable securities, choosing instruments with appropriate maturities or sufficient liquidity to provide sufficient head-room as determined by the above-mentioned forecasts.

iii. The table below analyses the Company's non-derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date for non-derivative financial liabilities. The amounts disclosed in the table are the contractual undiscounted cash flows.

Non-derivative financial liabilities:

December 31, 2019	Less than 1 year	Between 1 and 5 years	Over 5 years
Short-term borrowings	$ 18,604,770	$ -	$ -
Notes payable	3,276	-	-
Accounts payable (including related parties)	5,972,703	-	-
Other payables (including related parties)	9,985,359	-	-
Lease liability	40,860	125,645	934,269
Guarantee deposits received	-	-	3,258
Other financial liabilities	3,831,860	-	-

Non-derivative financial liabilities:

December 31, 2018	Less than 1 year	Between 1 and 5 years	Over 5 years
Short-term borrowings	$ 14,526,311	$ -	$ -
Notes payable	8,657	-	-
Accounts payable (including related parties)	4,021,555	-	-
Other payables (including related parties)	1,980,943	-	-
Guarantee deposits received	-	-	4,739
Other financial liabilities	2,581,910	-	-

iv. The Company does not expect the timing of occurrence of the cash flows estimated through the maturity date analysis will be significantly earlier, nor expect the actual cash flow amount will be significantly different.

(2) Fair value information

A. The different levels that the inputs to valuation techniques are used to measure fair value of financial and non-financial instruments have been defined as follows:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date. A market is regarded as active where a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. The fair value of the Company's investment in listed stocks and beneficiary certificates is included in Level 1.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Unobservable inputs for the asset or liability. The fair value of the Company's investment in equity investment without active market is included in Level 3.

B. The related information of financial and non-financial instruments measured at fair value by level on the basis of the nature, characteristics and risks of the assets and liabilities is as follows:

(a) The related information of nature of the assets is as follows:

December 31, 2019	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurement				
Financial assets at fair value through profit or loss				
Equity securities	$ 28,736	$ -	$ -	$ 28,736

December 31, 2018	Level 1	Level 2	Level 3	Total
Assets				
Recurring fair value measurement				
Financial assets at fair value through profit or loss				
Equity securities	$ 29,061	$ -	$ -	$ 29,061
Financial assets at fair value through other comprehensive income				
Equity securities	-	-	936	936
	$ 29,061	$ -	$ 936	$ 29,997

(b) The methods and assumptions the Company used to measure fair value are as follows:

i. The instruments the Company used market quoted prices as their fair values (that is, Level 1) are listed below by characteristics:

	Listed shares	Closed-end fund	Opened-end fund	Government bond	Corporate bond	Convertible (exchangeable) bond
Market quoted price	Closing price	Closing price	Net asset value	Translation price	Weighted average quoted price	Closing price

ii. Except for financial instruments with active markets, the fair value of other financial instruments is measured by using valuation techniques or by reference to counterparty quotes. The fair value of financial instruments measured by using valuation techniques can be referred to current fair value of instruments with similar terms and characteristics in substance, discounted cash flow method or other valuation methods, including calculated by applying model using market information available at the parent company only balance sheet date.

iii. The output of valuation model is an estimated value and the valuation technique may not be able to capture all relevant factors of the Company's financial and non-financial instruments. Therefore, the estimated value derived using valuation model is adjusted accordingly with additional inputs.

C. For the years ended December 31, 2019 and 2018, there was no transfer between Level 1 and Level 2.

D. The following chart is the movement of Level 3 for the years ended December 31, 2019 and 2018:

	2019	2018
	Non-derivative equity instrument	Non-derivative equity instrument
At January 1	$ 936	$ 6,575
Modified retrospective adjustment	-	(5,501)
Losses recognised in other comprehensive income	-	(138)
Current sale	(936)	-
At December 31	$ -	$ 936

E. For the years ended December 31, 2019 and 2018, there was no transfer into or out from Level 3.

F. The finance division is in charge of valuation procedures for fair value measurements being categorised within Level 3, which is to verify independent fair value of financial instruments. Such assessment is to ensure the valuation results are reasonable by applying independent information to make results close to current market conditions, confirming the resource of information is independent, reliable and in line with other resources and represented as the exercisable price, updating inputs used to the valuation model and making any other necessary adjustments to the fair value.

G. The following is the qualitative information of significant unobservable inputs and sensitivity analysis of changes in significant unobservable inputs to valuation model used in Level 3 fair value measurement:

	Fair value at December 31, 2018	Valuation technique	Significant unobservable input	Range (weighted average)	Relationship of inputs to fair value
Non-derivative equity instrument:					
Private equity fund investment	$ 936	Net asset value	Not applicable	-	Not applicable

13. SUPPLEMENTARY DISCLOSURES

(1) Significant transactions information

A. Loans to others: Please refer to table 1.

B. Provision of endorsements and guarantees to others: Please refer to table 2.

C. Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures): Please refer to table 3.

D. Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company's paid-in capital: Please refer to table 4.

E. Acquisition of real estate reaching $300 million or 20% of paid-in capital or more: None.

F. Disposal of real estate reaching $300 million or 20% of paid-in capital or more: None.

G. Purchases or sales of goods from or to related parties reaching $100 million or 20% of paid-in capital or more: Please refer to table 5.

H. Receivables from related parties reaching $100 million or 20% of paid-in capital or more: Please refer to table 6.

I. Trading in derivative instruments undertaken during the reporting periods: None.

J. Significant inter-company transactions during the reporting periods: Please refer to table 7.

(2) Information on investees

Names, locations and other information of investee companies (not including investees in Mainland China): Please refer to table 8.

(3) Information on investments in Mainland China

A. Basic information: Please refer to table 9.

B. Significant transactions, either directly or indirectly through a third area, with investee companies in the Mainland Area: Please refer to table 1, table 2 and table 7.

14. SEGMENT INFORMATION

None.

REALTEK SEMICONDUCTOR CORPORATION

Loans to others

Year ended December 31, 2019

Table 1

Expressed in thousands of NTD
(Except as otherwise indicated)

No (Note 1)	Creditor	Borrower	General ledger account	Is a related party	Maximum outstanding balance during the year ended December 31, 2019 (Note 3)	Balance at December 31, 2019	Actual amount drawn down (Note 4)	Interest rate	Nature of loan	Amount of transactions with the borrower	Reason for short-term financing	Allowance for doubtful accounts	Collateral Item	Collateral Value	Limit on loans granted to a single party	Ceiling on total loans granted (Note 2)	Footnote
0	Realtek Semiconductor Corporation	Realtek Singapore Private Limited	Other receivables-related parties	Y	$ 903,180	$ 903,180	$ -	-	Short-term financing	$ -	Operations	$ -	None	$ -	$ 2,721,899	$ 10,887,594	None
0	Realtek Semiconductor Corporation	Amber Universal Inc.	Other receivables-related parties	Y	602,120	602,120	602,120	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Bluocean Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	1,490,247	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Talent Eagle Enterprise Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	1,737,116	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
0	Realtek Semiconductor Corporation	Leading Enterprises Limited	Other receivables-related parties	Y	1,806,360	1,806,360	1,806,360	1.8	Short-term financing	-	Operations	-	None	-	2,721,899	10,887,594	None
1	Leading Enterprises Limited	Bluocean Inc.	Other receivables-related parties	Y	1,806,360	1,806,360	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
1	Leading Enterprises Limited	Talent Eagle Enterprise Inc.	Other receivables-related parties	Y	6,021,200	6,021,200	5,127,161	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
2	Amber Universal Inc.	Blueocean Inc.	Other receivables-related parties	Y	1,505,300	1,505,300	1,505,300	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
3	Cortina Access, Inc.	Leading Enterprises Limited	Other receivables-related parties	Y	903,180	903,180	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
4	Realtek Investment Singapore Private Limited	Realtek Singapore Private Limited	Other receivables-related parties	Y	3,010,600	3,010,600	1,255,420	1.8	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
5	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	Other receivables-related parties	Y	903,180	903,180	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None

REALTEK SEMICONDUCTOR CORPORATION

Loans to others

Year ended December 31, 2019

Table 1

Expressed in thousands of NTD
(Except as otherwise indicated)

No (Note 1)	Creditor	Borrower	General ledger account	Is a related party	Maximum outstanding balance during the year ended December 31, 2019 (Note 3)	Balance at December 31, 2019	Actual amount drawn down (Note 4)	Interest rate	Nature of loan	Amount of transactions with the borrower	Reason for short-term financing	Allowance for doubtful accounts	Collateral Item	Collateral Value	Limit on loans granted to a single party	Ceiling on total loans granted (Note 2)	Footnote
6	Realsil Microelectronics Corp.	RayMX Microelectronics Corp.	Other receivables-related parties	Y	$ 345,736	$ 345,736	$ -	-	Short-term financing	$ -	Operations	-	None	-	$ 10,887,594	$ 10,887,594	None
6	Realsil Microelectronics Corp.	Suzhou Hongwei Microelectronic Corp.	Other receivables-related parties	Y	345,736	345,736	-	-	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None
7	Cortina Network Systems Shanghai Co., Ltd.	Realsil Microelectronics Corp.	Other receivables-related parties	Y	129,651	129,651	43,217	4.35	Short-term financing	-	Operations	-	None	-	10,887,594	10,887,594	None

Note 1: The numbers filled in for the loans provided by the Company or subsidiaries are as follows:

(1) The Company is '0'.

(2) The subsidiaries are numbered in order starting from '1'.

Note 2: The Company's "Procedures for Provision of Loans" are as follows:

(1) Ceiling on total loans granted by the Company to all parties is 40% of the Company's net assets value as per its most recent financial statements.

(2) Limit on loans to a single party with business transactions is the business transactions occurred between the creditor and borrower in the current year. The business transaction amount is the higher of purchasing and selling during current year on the year of financing.

(3) For companies needing for short-term financing, the cumulative lending amount may not exceed 40% of the borrowing company's net assets based on its latest financial statements audited or reviewed by independent accountants.

The amount the Company or its subsidiaries lend to an individual entity may not exceed 10% of the Company's or subsidiary's net assets based on its latest financial statements audited or reviewed by independent accountants.

For the foreign companies which the Company holds 100% of the voting rights directly or indirectly, limit on loans is not restricted as stipulated in the above item (3). However, the ceiling on total loans and limit on loans to a single partymay not exceed 40% of the Company's net assets based on its latest financial statements audited or reviewed by independent accountants.

Note 3: Accumulated maximum outstandings balance of loans to others as of the reporting month of the current period.

Note 4: Fillin the actual amount of loans to others used by the borrowing company.

REALTEK SEMICONDUCTOR CORPORATION

Provision of endorsements and guarantees to others

Year ended December 31, 2019

Table 2

Expressed in thousands of NTD
(Except as otherwise indicated)

Number (Note 1)	Endorser/ guarantor	Party being endorsed/guaranteed: Company name	Party being endorsed/guaranteed: Relationship with the endorser/ guarantor (Note 2)	Limited on endorsements/ guarantees provided for a single party (Note 3)	Maximum outstanding endorsement/ amount as of December 31, 2019 (Note 4)	Outstanding endorsement/ guarantee amount at December 31, 2019 (Note 5)	Actual amont drawn down (Note 6)	Amount of endorsements/gurantees secured with collateral	Ratio of accumulated endorsement/ guarantee amount to net asset value of the endorser/ guarantor company	Ceiling on total amount of endorsements/ guarantees provided (Note 3)	Provision of endorsements/ guarantees by parent company to subsidiary (Note 7)	Provision of endorsements/ guarantees by subsidiary to parent company (Note 7)	Provision of endorsements/ guarantees to the party in Mainland China (Note 7)	Footnote
0	Realtek Semiconductor Corporation	Realtek Singapore Private Limited	2	$ 13,609,493	$ 2,721,899	$ 2,721,899	$ -	$ -	10%	$ 13,609,493	Y	N	N	
0	Realtek Semiconductor Corporation	Leading Enterprises Limited	2	13,609,493	5,443,797	5,443,797	316,272	-	20%	1,369,493	Y	N	N	
0	Realtek Semiconductor Corporation	Realsil Microelectronics Corp.	2	13,609,493	816,570	816,570	-	-	3%	1,369,493	Y	N	Y	
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	2	13,609,493	816,570	816,570	7,092	-	3%	1,369,493	Y	N	Y	
1	Leading Enterprises Limited	Realsil Microelectronics Corp.	2	13,609,493	602,120	602,120	-	-	2%	1,369,493	N	N	Y	
2	Realsil Microelectronics Corp.	RayMX Microelectronics Corp.	2	13,609,493	602,120	602,120	-	-	2%	1,369,493	N	N	Y	

Note 1: The numbers filled in for the endorsements/guarantees provided by the Company or subsidiaries are as follows:

(1)The Company is '0'.

(2)The subsidiaries are numbered in order starting from '1'.

Note 2: Relationship between the endorser/guarantor and the party being endorsed/guaranteed is classified into the following six categories:

(1) Having business relationship.

(2) The endorser/guarantor parent company owns directly and indirectly more than 50% voting shares of the endorsed/guaranteed subsidiary.

(3) The endorser/guarantor company owns directly and indirectly more than 50% voting shares of the endorser/guarantor parent company.

(4) The endorser/guarantor parent company owns directly or indirectly owns more than 50% voting shares of the endorsed/guaranteed subsidiary.

(5) Mutual guarantee of the trade as required by the construction contract.

(6) Due to joint venture, each shareholder provides endorsements/guarantees to the endorsed/guaranteed company in proportion to its ownership.

(7) Joint guarantee of the performance guarantee for pre-sold home sales contract as required under the Consumer Protection Act.

Note 3: Ceiling on total endorsements/guarantees granted by the Company and subsidiaries is 50% of the Company's net asset based on the latest financial statements audited or reviewed by independent accountants, and limit on endorsements/guarantees to a single party is 50% of the Company's net asset based on the latest financial statements audited or reviewed by independent accountants.

Note 4: Fill in the year-to-date maximum outstanding balance of endorsements/guarantees provided as of the reporting period.

Note 5: Fill in the amount approved by the Board of Directors or the chairman has been authorised by the Board of Directors based on subparagraph 8, Article 12 of the Regulations Gorverning Loaning of Funds and Making of Endorsements/Guarantees by Public Companies.

Note 6: Fill in the actual amount of endorsements/guarantees used by the endorsed/guaranteed company.

Note 7: Fill in 'Y' for those cases of provision of endorsements/guarantees by listed parent company to subsidiary and provision by subsidiary to listed parent company, and provision to the party in Mainland China.

REALTEK SEMICONDUCTOR CORPORATION

Holding of marketable securities at the end of the period (not including subsidiaries, associates and joint ventures)

December 31, 2019

Table 3

Expressed in thousands of NTD
(Except as otherwise indicated)

Securities held by	Marketable securities (Note 1)	Relationship with the securities issuer(Note 2)	General ledger account	As of December 31, 2019 Number of shares	Book value (Note 3)	Ownership (%)	Fair value	Footnote (Note 4)
Realtek Semiconductor Corporation	C-media Electronics Inc. - Common stock	Other related parties	Financial assets at fair value through profit or loss	1,623,501	$ 28,736	2.05%	$ 28,736	
Realking Investment Limited	Compal broadband networks Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	3,575,000	104,033	5.34%	104,033	
Realsun Investment Co., Ltd.	Shieh-Yong Investment Co., Ltd. - Common stock	None	Financial assets at fair value through other comprehensive income	23,124,000	216,401	3.03%	216,401	
Realsun Investment Co., Ltd.	Compal broadband networks Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	3,575,000	104,033	5.34%	104,033	
Leading Enterprises Limited	Fortemedia Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	8,623,301	97,516	6.89%	97,516	
Leading Enterprises Limited	Starix Technology, Inc.-Preferred stock	None	Financial assets at fair value through other comprehensive income	5,000,000	18,064	-	18,064	
Leading Enterprises Limited	Octtasia Investment Holding Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	9,000,000	657,021	12.49%	657,021	
Amber Universal Inc.	Octtasia Investment Holding Inc. - Common stock	None	Financial assets at fair value through other comprehensive income	4,726,836	345,070	6.56%	345,070	
Hung-wei Venture Capital Co., Ltd.	United Microelectronics Corporation - Common stock	None	Financial assets at fair value through other comprehensive income	336,346	5,533	-	5,533	
Hung-wei Venture Capital Co., Ltd.	C-media Electronics Inc.- Common stock	Other related parties	Financial assets at fair value through profit or loss	2,274,875	40,265	2.88%	40,265	
Hung-wei Venture Capital Co., Ltd.	Greatek Electroninc Inc. - Common stock	Other related parties	Financial assets at fair value through other comprehensive income	5,823,602	278,659	1.05%	278,659	
Hung-wei Venture Capital Co., Ltd.	Subtron technology Co., Ltd - Common stock	None	Financial assets at fair value through other comprehensive income	1,093,968	13,357	0.33%	13,357	
Hung-wei Venture Capital Co., Ltd.	Embestor Technology Inc. - Common stock	Other related parties	Financial assets at fair value through other comprehensive income	2,800,000	19,791	12.17%	19,791	
Cortina Network Systems Shanghai Co. Ltd.	Tian Tianjin Aggressive Fund	None	Financial assets at fair value through profit or loss	934,291	5,007	-	5,007	
Bluocean Inc.	CyWeeMotion Group Limited	None	Financial assets at fair value through other comprehensive income	4,800,000	-	6.59%	-	
RayMx Microelectronics Corp.	Tian Li Bao Money Fund	None	Financial assets at fair value through profit or loss	712	4	-	4	

Note 1: Marketable securities in the table refer to stocks, bonds, beneficiary certificates and other related derivative securities within the scope of IFRS 9 'Financial instrument'.

Note 2: Leave the column blank if the issuer of marketable securities is non-related party.

Note 3: Fill in the amount after adjusted at fair value and deducted by accumulated impairment for the marketable securities measured at fair value; fill in the acquisition cost or amortised cost deducted by accumulated impairment for the marketable securities not measured at fair value.

Note 4: The number of shares of securities and their amounts pledged as security or pledged for loans and their restrictions on use under some agreements should be stated in the footnote if the securities presented herein have such conditions.

REALTEK SEMICONDUCTOR CORPORATION

Acquisition or sale of the same security with the accumulated cost exceeding $300 million or 20% of the Company's paid-in capital

Year ended December 31, 2019

Table 4

Expressed in thousands of NTD

(Except as otherwise indicated)

					Balance as at January 1, 2019		Additions		Disposals				Balance as at December 31, 2019	
Investor	Marketable securities	General ledger account	Counterparty	Relationship with the investor	Number of shares	Amount	Number of shares	Amount	Number of shares	Selling price	Book value	Gain (loss) on disposal	Number of shares	Amount
Talent Eagle Enterprise Inc.	Ubilinx Technology Inc.	Equity investments under equity method	Ubilinx Technology Inc.	Investee company accounted for under equity method	26,000,000	$ 799,058	14,000,000	$ 405,182	-	$ -	$ -	$ -	40,000,000	$ 1,204,240

REALTEK SEMICONDUCTOR CORPORATION

Purchases or sales of goods from or to related parties reaching NT$100 million or 20% of paid-in capital or more

Year ended December 31, 2019

Table 5

Expressed in thousands of NTD
(Except as otherwise indicated)

			Transaction				Differences in transaction terms compared to third party transactions		Notes/accounts receivable(payable)		
Purchase/seller	Counterparty	Relationship with the counterparty	Purchase (sales)	Amount	Percentage of total purchase (sales)	Credit term	Unit price	Credit term	Balance	Percentage of total notes/accounts receivable (payable)	Footnote
Realtek Semiconductor Corporation	G.M.I Technology Inc.	Other related parties	(Sales)	($ 5,996,976)	(10%)	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	$ 1,172,793	11%	
Realtek Singapore Private Limited	G.M.I Technology Inc.	Other related parties	(Sales)	(5,226,298)	(9%)	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	929,236	9%	
RayMX Microelectronics Corp.	G.M.I Technology Inc.	Other related parties	(Sales)	(169,283)	0%	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	40,227	0%	
Realtek Semiconductor Corporation	Greatek Electronics Inc.	Other related parties	Purchase	1,024,163	3%	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	(313,185)	(4%)	
Realtek Singapore Private Limited	Greatek Electronics Inc.	Other related parties	Purchase	298,240	1%	Approximately the same with third party transactions	Approximately the same with third party transactions	Approximately the same with third party transactions	(16,329)	(0%)	

REALTEK SEMICONDUCTOR CORPORATION

Receivables from related parties reaching NT$100 million 0r 20% of paid-in capital or more

December 31, 2019

Table 6

Expressed in thousands of NTD

(Except as otherwise indicated)

Creditor	Counterparty	Relationship with the counterparty	Balance as at December 31, 2019	Turnover rate	Overdue receivables		Amount collected subsequent to the balance sheet date	Allowance for doubtful accounts
					Amount	Action taken		
Realtek Semiconductor Corporation	G.M.I Technology Inc.	Other related parties	$ 1,172,793	5.57	$ -	-	$ 569,399	$ 11,847
Realtek Singapore Private Limited	G.M.I Technology Inc.	Other related parties	929,236	6.27	-	-	368,596	-

REALTEK SEMICONDUCTOR CORPORATION

Significant inter-company transactions during the reporting period

Year ended December 31, 2019

Table 7

Expressed in thousands of NTD
(Except as otherwise indicated)

				Transaction			
Number (Note 1)	Company name	Counterparty	Relationship (Note 2)	General ledger account	Amount	Transaction terms	Percentage of consolidated total operating revenues or total assets (Note 3)
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	1	Other receivables	$ 48,980	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.07%
0	Realtek Semiconductor Corporation	RayMX Microelectronics Corp.	1	Sales revenue	65,119	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.11%
1	Leading Enterprises Limited	Realtek Semiconductor (Japan) Corp.	3	Technical service fees	34,049	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.06%
2	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	3	Technical service fees	1,639,884	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	2.70%
2	Realtek Singapore Private Limited	Realsil Microelectronics Corp.	3	Other payables	552,750	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.75%
2	Realtek Singapore Private Limited	Realtek Semiconductor (Shen Zhen) Corp.	3	Technical service fees	347,426	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.57%

REALTEK SEMICONDUCTOR CORPORATION

Significant inter-company transactions during the reporting period

Year ended December 31, 2019

Table 7

Expressed in thousands of NTD

(Except as otherwise indicated)

				Transaction			
Number (Note 1)	Company name	Counterparty	Relationship (Note 2)	General ledger account	Amount	Transaction terms	Percentage of consolidated total operating revenues or total assets (Note 3)
2	Realtek Singapore Private Limited	Realtek Semiconductor (Shen Zhen) Corp.	3	Other payables	$ 116,209	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.16%
2	Realtek Singapore Private Limited	Cortina Access, Inc.	3	Technical service fees	214,462	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.35%
2	Realtek Singapore Private Limited	Cortina Access, Inc.	3	Other payables	20,143	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.03%
2	Realtek Singapore Private Limited	Cortina Network Systems Shanghai Co. Ltd.	3	Technical service fees	106,735	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.18%
2	Realtek Singapore Private Limited	Cortina Network Systems Shanghai Co. Ltd.	3	Other payables	27,690	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.04%
4	Realtek Singapore Private Limited	Cortina Systems Taiwan Limited	3	Technical service fees	96,982	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.16%
2	Realtek Singapore Private Limited	Realtek Semiconductor (Japan) Corp.	3	Technical service fees	35,055	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.06%

REALTEK SEMICONDUCTOR CORPORATION

Significant inter-company transactions during the reporting period

Year ended December 31, 2019

Table 7

Expressed in thousands of NTD

(Except as otherwise indicated)

				Transaction			
Number (Note 1)	Company name	Counterparty	Relationship (Note 2)	General ledger account	Amount	Transaction terms	Percentage of consolidated total operating revenues or total assets (Note 3)
2	Realtek Singapore Private Limited	RayMX Microelectronics Corp.	3	Other receivables	$ 48,980	No similar transaction can be compared with. Transaction prices and terms are determined in accordance with mutual agreement.	0.07%

Note 1: The numbers filled in for the transaction company in respect of inter-company transactions are as follows:

(1) Parent company is '0'.

(2) The subsidiaries are numbered in order starting from '1'.

Note 2: Relationship between transaction company and counterparty is classified into the following three categories; fill in the number of category each case belongs to (If transactions between parent company and subsidiaries or between subsidiaries refer to same transaction, it is not required to disclose twice. For example, if the parent company has already disclosed its transaction with a subsidiary, then the subsidiary is not required to disclose the transaction; for transactions between two subsidiaries, if one of the subsidiaries has disclosed the transaction, then the other is not required to disclose the transaction.):

(1) Parent company to subsidiary.

(2) Subsidiary to parent company.

(3) Subsidiary to subsidiary

Note 3: Regarding percentage of transaction amount to consolidated total operating revenues or total assets, it is computed based on period-end balance of transaction to consolidated total assets for balance sheet accounts and based on accumulated transaction amount for the period to consolidated total operating revenues for income statement accounts.

Note 4: Only transactions above NT$10 million are disclosed. Transactions of related parties are not further disclosed here.

REALTEK SEMICONDUCTOR CORPORATION

Information on investees

Year ended December 31, 2019

Table 8

Expressed in thousands of NTD
(Except as otherwise indicated)

				Initial investment amount		Shares held as at December 31, 2019					
Investor	Investee	Location	Main business activities	Balance as at December 31, 2019	Balance as at December 31, 2018	Number of shares	Ownership (%)	Book value	Net profit (loss) of the investee for the year ended December 31, 2019	Investment income (loss) recognised by the Company for the year ended December 31, 2019	Footnote
Realtek Semiconductor Corporation	Leading Enterprises Limited	British Virgin Islands	Investment holdings	$ 15,005,734	$ 15,318,249	39,130	100%	$ 11,151,040	$ 282,019	$ 282,019	Subsidiary
Realtek Semiconductor Corporation	Amber Universal Inc.	British Virgin Islands	Investment holdings	4,739,146	4,837,812	41,432	100%	3,312,175	87,008	87,008	Subsidiary
Realtek Semiconductor Corporation	Realtek Singapore Private Limited	Singapore	ICs manufacturing, design, research, development, sales, and marketing	2,408,480	2,458,640	80,000,000	89.03%	10,370,572	6,306,957	5,638,064	Subsidiary
Realtek Semiconductor Corporation	Bluocean Inc.	Cayman Islands	Investment holdings	3,313,165	3,382,167	110,050,000	100%	3,479,391	111,913	111,913	Subsidiary
Realtek Semiconductor Corporation	Talent Eagle Enterprise Inc.	Cayman Islands	Investment holdings	3,435,095	3,506,635	114,100,000	100%	2,585,499	(278,776)	(278,776)	Subsidiary
Realtek Semiconductor Corporation	Realtek Investment Singapore Private Limited	Singapore	Investment holdings	6,021,200	6,146,600	200,000,000	100%	6,494,453	203,956	203,956	Subsidiary
Realtek Semiconductor Corporation	Realsun Investments Co., Ltd.	Taiwan	Investment holdings	280,000	280,000	28,000,000	100%	354,481	6,966	6,966	Subsidiary
Realtek Semiconductor Corporation	Hung-wei Venture Capital Co., Ltd.	Taiwan	Investment holdings	250,000	250,000	25,000,000	100%	418,438	19,668	19,668	Subsidiary
Realtek Semiconductor Corporation	Realking Investments Limited	Taiwan	Investment holdings	293,930	293,930	29,392,985	100%	286,939	(1,384)	(1,384)	Subsidiary
Realtek Semiconductor Corporation	Realsun Technology Corporatioin	Taiwan	ICs manufacturing, design, research, development, sales, and marketing	5,000	5,000	500,000	100%	5,107	47	47	Subsidiary
Realtek Semiconductor Corporation	Bobitag Inc.	Taiwan	Manufacturing and installation of computer equipment and wholesasle, retail and related services of electronic materials and information/software	19,189	20,000	1,918,910	66.67%	19,398	277	184	Subsidiary
Realtek Semiconductor Corporation	Technology Partner V Venture Capital Corporation	Taiwan	Investment holdings	66,657	84,565	4,178,509	32.43%	22,247	(21,594)	(1,151)	Investments accounted for under equity method
Realtek Semiconductor Corporation	Estinet Technologies Incorporation	Taiwan	Research and development, design, manufacturing, sales and other services of electronic components, information/Software and integrated circuits.	110,000	110,000	4,000,000	16.10%	3,701	(57,015)	(5,384)	Investments accounted for under equity method
Realtek Semiconductor Corporation	5VTechnologies, Taiwan Ltd.	Taiwan	Research and development, design, manufacturing, sales and other services of electronic components, information/Software and integrated circuits.	46,699	46,699	46,699	24.42%	-	(39,968)	(9,398)	Investments accounted for under equity method
Realking Investments Limited	Innorich Venture Capital Corp.	Taiwan	Venture capital activities	200,000	200,000	20,000,000	37.38%	160,023	(21,228)	(7,900)	Investments accounted for under equity method

REALTEK SEMICONDUCTOR CORPORATION

Information on investees

Year ended December 31, 2019

Table 8

Expressed in thousands of NTD

(Except as otherwise indicated)

Investor	Investee	Location	Main business activities	Initial investment amount: Balance as at December 31, 2019	Initial investment amount: Balance as at December 31, 2018	Shares held as at December 31, 2019: Number of shares	Shares held as at December 31, 2019: Ownership (%)	Shares held as at December 31, 2019: Book value	Net profit (loss) of the investee for the year ended December 31, 2019	Investment income (loss) recognised by the Company for the year ended December 31, 2019	Footnote
Leading Enterprises Limited	Realtek Semiconductor (Japan) Corp.	Japan	ICs deign,sales, and consultancy	$ 5,542	$ 5,568	400	100%	$ 2,483	$ 255	255	Sub-Subsidiary
Leading Enterprises Limited	Circon Universal Inc.	Mauritius	Investment holdings	1,950,869	1,991,498	64,800,000	100%	8,151	6	6	Sub-Subsidiary
Leading Enterprises Limited	Realtek Singapore Private Limited	Singapore	ICs manufacturing, design, research, development, sales, and marketing	1,257,578	1,283,769	9,856,425	10.97%	1,281,046	6,306,957	$ 691,815	Sub-Subsidiary
Amber Universal Inc.	Realtek Semiconductor (HK) Limited	Hong Kong	Information services and technical support	5,799	5,886	-	100%	1,159	(25)	(25)	Sub-Subsidiary
Realtek Singapore Private Limited	Empsonic Enterprises Inc.	Mauritius	Investment holdings	850,495	868,207	2,825,000	100%	1,455,628	98,711	98,711	Sub-Subsidiary
Realtek Singapore Private Limited	Cortina Access Inc.	U.S.A	R&D and information services	1,229,710	1,255,320	16,892	100%	1,025,799	30,063	30,063	Sub-Subsidiary
Realtek Singapore Private Limited	Cortina Systems Taiwan Limited	Taiwan	R&D and technical support	60,212	61,466	21,130,000	100%	61,592	5,371	5,371	Sub-Subsidiary
Realtek Singapore Private Limited	Realtek Viet Nam Co., Ltd.	Vietnam	R&D and technical support	30,106	30,733	1,000,000	100%	19,772	(9,032)	(9,032)	Sub-Subsidiary
Talent Eagle Enterprise Inc.	Ubilinx Technology Inc.	U.S.A	R&D and information services	1,204,240	799,058	40,000,000	100%	41,892	(413,581)	(413,581)	Sub-Subsidiary

Note：The amount of foreign currencies denominated in New Taiwan dollars in this table, which related to income and expenses were re-translated at the average exchange rate from January 1, 2019 to December 31, 2019, others were re-translated at the exchange rate prevailing at the end of the financial reporting period.

REALTEK SEMICONDUCTOR CORPORATION

Information on investments in Mainland China

Year ended December 31, 2019

Table 9

Expressed in thousands of NTD

(Except as otherwise indicated)

Investee in Mainland China	Main business activities	Paid-in Capital	Investment method (Note1)	Accumulated amount of remittance from Taiwan to Mainland China as of January 1, 2019	Amount remitted from Taiwan to Mainland China/Amount remitted back to Taiwan for the year ended December 31, 2019		Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2019	Net income of investee for the year ended December 31, 2019	Ownership held by the Company (direct or indirect)	Investment income (loss) recognised by the Company for the year ended December 31, 2019 (Note2(2)C)	Book value of investment in Mainland China as of December 31, 2019	Accumulated amount of investment income remitted back to Taiwan as of December 31, 2019	Footnote
					Remitted to Mainland China	Remitted back to Taiwan							
Cortina Network Systems Shanghai Co., Ltd.	R&D and technical support	$ 108,382	(2)	$ 108,382	$ -	$ -	$ 108,382	$ 7,476	100%	$ 7,476	$ 96,784	$ -	
Realsil Microelectronics Corp.	R&D and technical support	842,968	(2)	842,968	-	-	842,968	99,574	100%	99,574	1,450,798	-	
Realtek Semiconductor (Shen Zhen) Corp.	R&D and technical support	150,530	(2)	150,530	-	-	150,530	22,194	100%	22,194	253,983	-	
RayMX Microelectronics Corp.	ICs manufacturing, design, research, development, sales, and marketing	113,445	(2)	113,445	-	-	113,445	(28,097)	100%	(28,097)	85,230	-	

Company name	Accumulated amount of remittance from Taiwan to Mainland China as of December 31, 2019	Investment amount approved by the Investment Commission of the Ministry of Economic Affairs (MOEA)	Ceiling on investments in Mainland China imposed by the Investment Commission of MOEA
Cortina Network Systems Shanghai Co., Ltd.	$ 108,382	$ 108,382	$ 16,331,391
Realsil Microelectronics Corp.	842,968	842,968	
Realtek Semiconductor (Shan Zhen) Corp.	150,530	150,530	
RayMX Microelectronics Corp.	113,445	113,445	

Note 1: Investment methods are classified into the following three categories; fill in the number of category each case belongs to:

(1) Directly invest in a company in Mainland China.

(2) Through investing in an existing company in the third area, which then invested in the investee in Mainland China.

(3) Others.

Note 2: In the Investment income (loss) recognised by the Company for the year ended December 31, 2019 column, except for the financial statements of Cortina Network Systems Shanghai Co. Ltd. were audited by other independent accountants, the remaining financial statements were audited by the independent accountants of parent company in Taiwan.

Note 3: The amount of foreign currencies denominated in New Taiwan dollars in this table, which related to income and expenses were re-translated at the average exchange rate from January 1, 2019 to December 31, 2019, others were re-translated at the exchange rate prevailing at the end of the financial reporting period.